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STRATEGIC BUSINESS PLAN FOR MWH GLOBAL IN TURKEY

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SUMMARY

This research has been developed as a result of an internship carried out in the Power & Energy Business Unit in MWH South-Europe, in Milan. MWH Global is an international engineering, construction and strategic consulting company, offering services across water, energy, waste and infrastructure sectors. The core business of the company is wet infrastructure. MWH aims to create a self-sustaining business in Turkey by growing a profitable practice centralized on its main competences.

The Republic of Turkey is a rapidly developing country and the economic growth tendency is expected to continue during the following years, which creates an opportunity for the companies to expand their operations in Turkey. The objective of this research is to provide a Strategic Business Plan for MWH South-Europe, based on the request for a deeper analysis of how to build a successful business in Turkey.

This research is designed with the help of a multifunctional framework that considers external and internal conditions. External analysis was carried out to evaluate the attractiveness of the business and to find main opportunities and threats. A further outline has been provided about structural decomposition of potential clients. The competitor analysis is added to ensure a more complete market consideration. Internal analysis was complemented this aiming to expose main strengths and weaknesses. This was combined with a qualitative assessment of the critical aspects to obtain an extensive SWOT analysis. The further step was to develop three different strategic options to create focused solution in line with the company objectives and the market conditions. “Strategic options evaluation matrix”, considering the current priority and risk aspects was developed to create a general picture for the segmented clients through different tiers.

Finally the overall roadmap was summarized, risks and priorities were identified and future recommendations to obtain solutions for advancement and possible improvements were given. Implementation framework was created with an aim of guiding and directing the managerial decisions. This strategic plan will serve as a substantial reference for MWH.

Acknowledgements

This research dissertation would not have been possible without the help and support of many people. I would like to express my gratitude to the supervisor, Dr. Federico Frattini, for his guidance and precise advices. Deepest gratitude is also due to the MWH South-Europe team for giving me the opportunity for realizing this project.

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1. INTRODUCTION

This research has been developed as a result of my internship that was carried out in the Power & Energy Business Unit in MWH South-Europe, based in Milan. MWH Global is an international engineering, construction and strategic consulting company, located in 38 countries worldwide with its headquarters in USA. It offers consultancy and engineering services across water, energy, waste and infrastructure sectors and it is mainly active in the wet infrastructure sector. MWH aims to create a self-sustaining business in Turkey by growing a profitable practice centralized on water, energy, waste and transportation infrastructures using its international experience.

The objective of this research is to provide a Strategic Business Plan for MWH South-Europe, based on a detailed analysis of the business opportunities in Turkey. This plan has been designed to answer MWH's request for a deeper analysis of how to build a successful business in Turkey.

This research is created with the help of a multifunctional framework that considers external and internal conditions. A structured path ahead is included to outline how the company can expand and develop its Turkish operation further into the future.

The Republic of Turkey is a Eurasian country with its Eastern and Western traits and linked to the oceans through the Black, Marmara and Mediterranean seas surrounded on three sides. Turkey has a strategic importance in the world with its geopolitical location within the intersection point of Asia and Europe and also it is viewed culturally as a unique bridge between all faiths as well as Eastern and Western civilizations.

Turkish economy recently is on the verge of attaining economic stability and sustainable growth. Turkey has an important potential for the global business with its high growth potential, qualified managers, labor force, rapidly growing private sector and strong industry investments. Hence, it has a high potential for foreign direct investments. International companies are seeking to start their business and expand their operations in emerging markets such as Turkey.

Economic growth has caused an increase in energy demand, industrialization and urbanization, thus it leads raising concerns about environmental issues. These environmental concerns are forcing Turkey to form an effective control management on water, waste and air pollution aspects.

Energy sector is widely seen as the most promising and attractive investment area in the Turkish economy. The market is experiencing a transition towards a competitive market structure in order to attract private sector investment. Privatization of energy distribution has reached its climax in the history of Turkey. Turkey has a proven large potential for renewable energy investment projects. Current energy policy in Turkey focuses on diversification of energy sources and suppliers.

MWH Global has faced re-organizational changes with the objective of increasing internal collaboration and cross-selling. The main challenge on the short term is to position the company strategically in order to sustain the growth. MWH is seeking to improve its market share in Europe Africa region during the transition phase. This strategic plan will serve as a substantial reference for MWH.

2. METHODOLOGY

This chapter describes and explains the methodology deployed in this research. The objective of this research is to provide a Strategic Business Plan for MWH South-Europe, based on a detailed analysis of the business opportunities in Turkey. The logical flow of the strategically decisional process is well established by identifying the goal and the methods, by which it is aimed to achieve those goals proposed.

Initially external analysis was carried out to evaluate the attractiveness of the business area and to find main opportunities and threats towards the market. Environmental influences were identified through PESTE analysis, which measures a business' market and potential according to the political, economic, social, technological and environmental aspects.

External analysis was continued through structural decomposition of potential clients in the market. Moreover a further outline has been provided about organized industrial zones, “free zones” and the relevant business associations that meet with MWH’s interests in the market. The competitor analysis is added to ensure a more complete market consideration.

Then internal analysis was complemented this aiming to expose main strengths and weaknesses. This was combined with a qualitative assessment of the critical aspects to obtain an extensive SWOT analysis, which provides strategic intelligence on strengths and weaknesses, country opportunities for growth, challenges and threats from current competition and future prospects. The further step was to develop three different strategic options that aim to create focused solution in line with the objectives of the company and the market conditions. A matrix considering the current priority and risk aspects was developed to create a general picture for the segmented clients through three different tiers.

At the end in the conclusion part the overall roadmap was summarized, risks and priorities were identified and future recommendations were given.

The input was taken from academic literature review, official statistical institutions, web sites of the ministries, country fact sheets, existing analysis about relevant topics, essays and journals. The background reading and the literature review was an on-going process considering that the updated official reports were published during the research, which had a significant impact on this dissertation. The data was examined as the part of the quantitative analysis to ensure that the expressions are accurate. Hence, the investigation and reading was a continuous progress. The

research was intentionally undertaken with a close interaction with MWH employees including the managerial team, key experts in the sector and professionals from the clients. Due to the lack of data related to some areas, interviews and internal meetings were realized to obtain proper aspects. The necessary information for internal analysis was obtained from sources of the company such as MWH Knet, that is a intranet platform to share knowledge globally, statement of qualification documents of the company, project execution documents, strategic reports that emphasize the main focus.

3. EXTERNAL ANALYSIS

External analysis aims to evaluate the attractiveness of the business area and to find main opportunities and threats towards the market. This section includes PESTE analysis, which measures the market and potential of a business according to political, economic, social, technological and environmental aspects.

3.1. PESTE ANALYSIS

Political

The Republic of Turkey is a Eurasian country with its Eastern and Western traits and linked to the oceans through the Black, Marmara and Mediterranean seas surrounded on three sides. The political analysis of Turkey includes monopolies legislation, government stability, employment law, foreign trade regulations and taxation policy. Turkey has a strategic importance in the world with its geopolitical location within the intersection point of Asia and Europe and also it is viewed culturally as a unique bridge between all faiths as well as Eastern and Western civilizations.

The Republic of Turkey is an indivisible entity and a secular, democratic, social state under the rule of law since its establishment in 1923. The reforms of the first president of Republic, Mustafa Kemal Atatürk, constituted the framework for the development of the modern Turkish Republic. [1] Turkish Republic has a multi-party parliamentary democracy since 1946. Legislative power is vested in the Turkish Grand National Assembly (TGNA) on behalf of the Turkish Nation. This power cannot be delegated and the TGNA comprises 550 deputies designated in elections held every four years. [2] The executive branch in Turkey has a dual structure. The Government headed by the Prime Minister and it is composed of the President of the Republic and the Council of Ministers. [3] The judiciary is independent of both the legislature and the executive. The legal system is largely based on continental European models. A Constitutional Court is also entitled to cancel legislation passed by the Parliament. It can cancel those laws, or parts of them, which it decides to be incompatible with the Constitution.

Foreign trade in Turkey is regulated by under secretariat for Foreign Trade. Under secretariat for Customs is empowered with implementation of these regulations at the borders. In addition, administrations ministry of finance is the regulatory authority of tax issues and under secretariat for treasury is the regulatory authority of exchange regime and they have influence on the foreign trade regime in Turkey. [4]

In Turkey, foreign investors are entitled to establish or participate in any of the company types designated by Turkish Commercial Code and Code of Obligations. Foreign Direct Investment (FDI) Law aims to regulate the principles to encourage foreign direct investments; to protect the rights of foreign investors; to define investment and investor in line with international standards; to establish a notification-based system for foreign direct investments rather than screening and approval; and to increase foreign direct investments through established policies. Foreign investors have the same rights as the Turkish nationals have. With respect to this principle, no additional approvals and authorizations are required for the establishment of the foreign companies, branches and participation to the existing companies. [5]

Turkish taxation system consists of two main taxes that are income tax and corporate tax. An individual is subject to the income tax relevant to his income and earnings while a company is subject to the corporate tax. The “Turkish Corporate Tax Law” sets provisions and rules applicable to the income resulted from the activities of corporations and corporate bodies, whereas the “Income Tax Law” deals with the income derived by individuals. The income tax is levied on the income of individuals while the corporate tax is levied on earnings derived by corporations and corporate bodies. Corporations specified by the law, as taxpayers in respect to the corporate tax are capital companies and similar foreign companies; cooperatives; public enterprises; enterprises owned by foundations societies and associations and joint ventures. [6]

In recent years, there have been significant changes in the tax legislation introducing a set of measures to simplify tax structure and to increase the efficiency of the tax administration while reducing the tax rates gradually in Turkey. The new Corporate Tax Code became effective on 2007 and introduced structural changes for the existing applications in the Turkish tax system. The changes are reduction in corporate tax rate, thin capitalization, transfer pricing, participation exemption from foreign subsidiaries, reduced capital gains taxation on shares and immovable property, liquidation, spin-off, share exchange, tax exemptions and foreign tax credit applications [7]

In Turkey there are tax benefits and incentives in Technology Development Zones, Industrial Organized Zones and “Free Zones”. The companies located in those areas could include total or partial exemption from Corporate Income Tax, a grant on employer’s social security share, as well as land allocation. Moreover R&D and Innovation Support Law aim to stimulate research and development activities in Turkey. [8]

Turkey is the member of international organizations such as Council of Europe, the North Atlantic Treaty Organization (NATO), Organization for Economic Cooperation and Development (OECD), Organization for Security and Co-operation in Europe (OSCE), United Nations Educational, Scientific and Cultural Organization (UNESCO), World Trade Organization (WTO) and the Group of Twenty Finance Ministers and Central Bank Governors (G-20 Developing Nations). Turkey has Free Trade Agreements (FTA) with 16 countries. Turkey has bilateral trade relationships with Europe, Asia-Pacific, Eurasia, Middle East and North Africa, Sub-Saharan Africa, Americas. Regional and Multiple Trade Relationships of Turkey are European Union (EU), Economic Cooperation Organization (ECO), Developing 8 Countries Organization for Economic Cooperation (D8), Organization of Islamic Cooperation (OIC) and Black Sea Economic Cooperation (BSEC) [9]

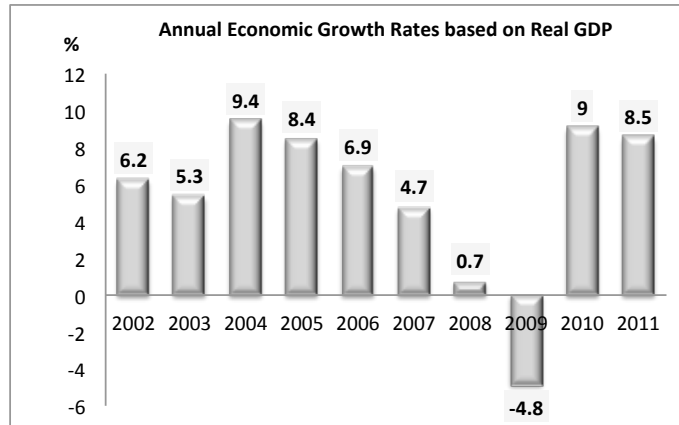
Turkey is a part of the EU Customs Union since 1996, a candidate country to the EU since 1999 that started accession negotiations in 2005. [10] The relations with Europe and Turkey have always been one of the major parts of Turkish foreign policy. [11]

Economical

Republic of Turkey is a rapidly developing country and the largest national economy in Central and Eastern Europe. Turkey has a large domestic market and it is well tied with surrounding markets in the Caucasus, Central Asia, North Africa and the Middle East. Turkish economy is a complex mix of modern industry, commerce and traditional agriculture sector. It is one of the most powerful countries in the region with its dynamic economy well integration with European markets.

The economical analyses of the Republic of Turkey consist of a comprehensive research including an overview of gross domestic products (GDP) trends, interest rates, money supply, currency inflation, unemployment rate and the average income. Besides, the effects of the global financial crises on the economy and the implementation of the governmental recovery plans considering all the factors affecting the financial structure are evaluated.

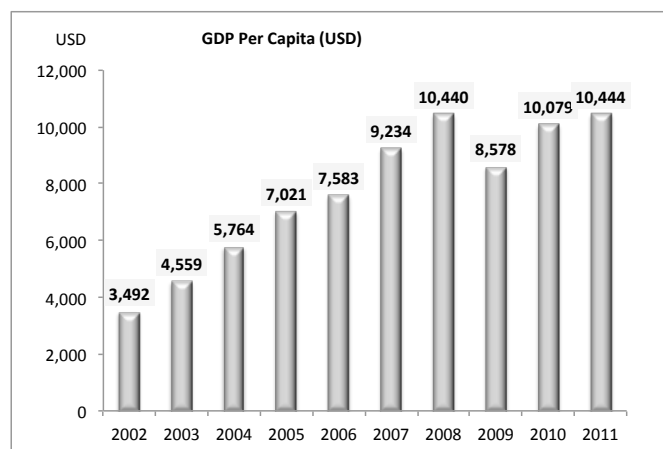
Turkish economy has experienced a remarkable growth rate after 1980's. This had been attributed to three main factors that are the modernization of the existing industry, technology transfer, shift from agriculture towards industry and service activities and the effect of international trade and competition. There had been a considerable change in the business environment in Turkey after 2011. It is supported with a significant increase in foreign direct investments (FDI) and the efficiency-oriented restructuring in the private sector. The graph below demonstrates Turkish annual economic growth rate based on real gross domestic product (GDP) between 2002 and 2011.



Source: Turkish Statistical Institute (TurkStat), 2012

Figure 1. Annual Economic Growth Rates based on Real GDP (2002-2011)

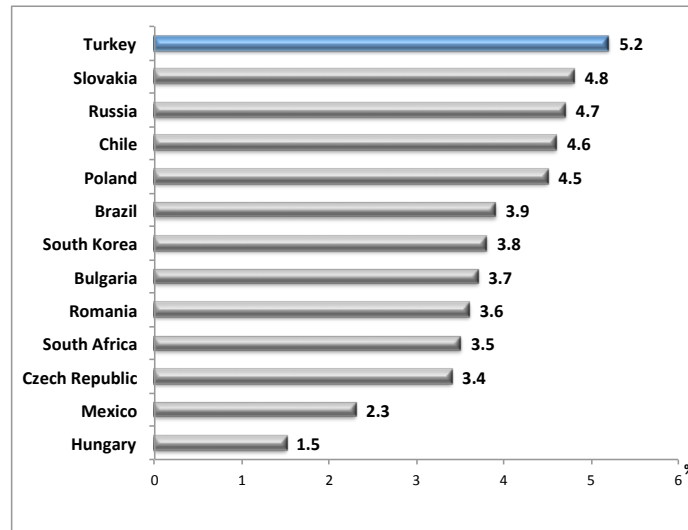
Turkish economy had been affected negatively from global financial crisis during 2008-2009. The contraction in GDP remained below the expectations with 4.8 percent in 2009. Turkish economy started to recover on the second quarter of 2009 and the recovery continued in the first half of 2010. During this period the significant increase had been recorded in the industrial, construction, trade and transportation sectors. On the other hand, recovery in demand has originated from the rapid growth in private consumption and investments. The increase in inventories has also contributed to the growth. As a result, annual GDP growth has reached 9.0 percent in 2010 that is considered higher than expected. In 2011, Turkish Economy expanded by 8.5 percent. [12] The average annual real GDP growth rate of Turkey during the last decade had been 5.2 percent, GDP was recorded as USD 231 billion in 2002 and with a significant growth it reached to USD 772 billion in 2011. [13] The figure below demonstrates the GDP Per Capita between 2002-2011.



Source: Turkish Statistical Institute (TurkStat), 2012

Figure 2. GDP Per Capita (2002-2011)

The average annual real GDP growth of Turkey between 2002-2011 is demonstrated on the figure below, comparing with other developing economics, that was presented on the International Monetary Fund (IMF) World Economic Outlook 2012. [14]



Source: IMF World Economic Outlook 2012, Turkish Statistical Institute (TurkStat)

Figure 3. Average Annual Real GDP Growth Percentage (2002- 2011)

Turkish Economy is expected to grow by 4% in 2012 and this growth is expected to increase to 5% on the 2013 and 2014. Table below demonstrated the Economic Targets of Turkey according to the Medium Term Program from 2012 until 2014 by the Ministry of Development.

	2012(*)	2013(*)	2014(*)
GDP (Billion \$, Current Prices)	822	888	952
GDP Per Capita (\$)	10,973	10,716	12,412
Real GDP Growth	4	5	5
Unemployment Rate (%)	10.4	10.2	9.9
Current Account Balance (Billion \$)	-65.4	-67	-67.1
Current Account Balance / GDP (%)	-8	-7.5	-7

(*)Medium Term Program targeted data

Source: Ministry of Development, Medium Term Economic Program 2012- 2014, October 2011

Table 1. Economic Targets of Republic of Turkey (2012-2014)

The banking sector in Turkey has proven particularly strong during the recent global financial crises in 2008, partly due to existing recovery from the shake-out during a domestic 2000-2001 financial crisis with the new Banking Act of 2005, and partly due to structural transformations anchored by the accession process and a strict IMF programme.

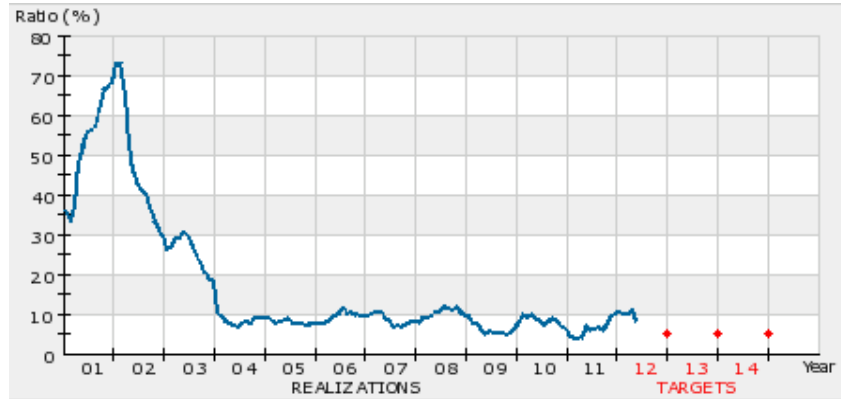
The current accounts deficit of Republic of Turkey started to widen with exports limited by the development in foreign demand. The increase in the international goods, energy prices and the appreciation of TL in real terms has also contributed to this fact. Besides, the non-energy current account had produced a surplus of USD 12 billion in 2009 and posted a deficit of USD 14.6 billion in 2010. As a result, the current account deficit in 2010 was recorded as USD 48.6 billion, which is 247% higher than the USD 14 billion deficit posted in 2009. [15]

The widening current account deficit has raised policy-makers' concerns about Turkey's energy dependence. The latter has resulted in an increasing policy interest in energy efficiency and the renewable energy sector.

The currency of Turkey is Turkish Lira (TRY). As of December 2011, Turkish Lira has depreciated by 13.2% annually in terms of the CPI-based real effective exchange rate. The level of depreciation is 12.3% in terms of the PPI-based real effective exchange rate. [16]

Turkey's inflation rate, measured by the consumer price index (CPI), became 6.5 percent in 2009, with an approximately 3.5 point decline relative to 2008. The marked slowdown in economic activities due to the effects of global crisis and the decline in commodity prices have been determining factors in this development. On the other hand, inflation has entered a rising trend in the last quarter of 2009 due to the price increases caused by tax arrangements and the rise in unprocessed food prices. Annual inflation in 2010 was 6,4, which was close to the expectations. [17]

The CPI inflation rate followed a fluctuating trend and was realized as 10.4 percent in 2011. The largest upward contribution came from alcoholic beverages and tobacco. Miscellaneous goods and services, transportation, food and non-alcoholic beverages, furnishings and household equipment were the other indices where high increases were realized. The updated data announced from the official statistics bureau that Turkey's annualized CPI is 10.43 percent and annualized producer price index (PPI) was recorded at 8.2 percent on March 2012. [18] Central Bank of Republic of Turkey demonstrates the fluctuation on the annual CPI between 2002-2011, as it is given on the figure below. The targeted annual CPI and the realization value are given with the targeted value for 2012, 2013 and 2014.



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Target	35	20	12	8	5	4	4	7,5	6,5	5,5	5	5	5
Realization	29,7	18,4	9,3	7,7	9,6	8,4	10,1	6,5	6,4	10,4	-	-	-

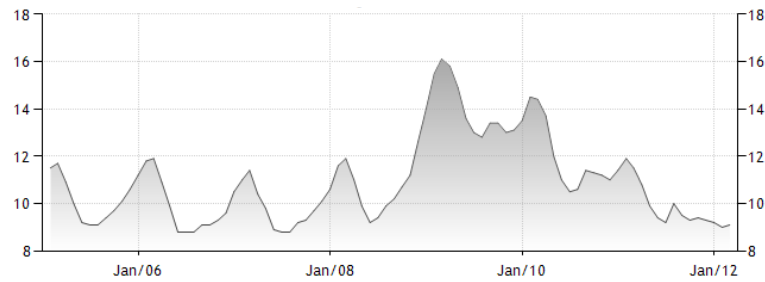
Source: Central Bank of the Republic of Turkey, 2012

Figure 4. Annual CPI and Targets in Turkey (2002-2014)

The benchmark interest rate in Turkey was last reported at 5.75 percent by 2012. Historically, from 1990 until 2012, Turkey Interest Rate averaged 61.03 Percent reaching an all time high of 500.00 Percent in March of 1994 and a record low of 5.00 Percent in February of 2000. In Turkey the interest rates decisions are taken by the Central Bank of the Republic of Turkey Monetary Policy Committee.

Turkish economy is based on a very young population and relatively low labor costs. Turkey Unemployment Rate averaged approximately 10.9 Percent from 2005 until 2012. The unemployment rate in Turkey was reported at 9.1 percent in February of 2012. In 2009, unemployment rate has reached 14 percent. The high level contraction in employment in the industrial sector and the increase of total labor force has contributed to the increase in the unemployment rate. The economic performance was beyond expectations in the first half of 2010. The decrease in the unemployment rate has been achieved despite the increase in the labor force participation rate. However unemployment rate declined constantly after that peak level, reaching 11.7 percent in July 2010. [19]

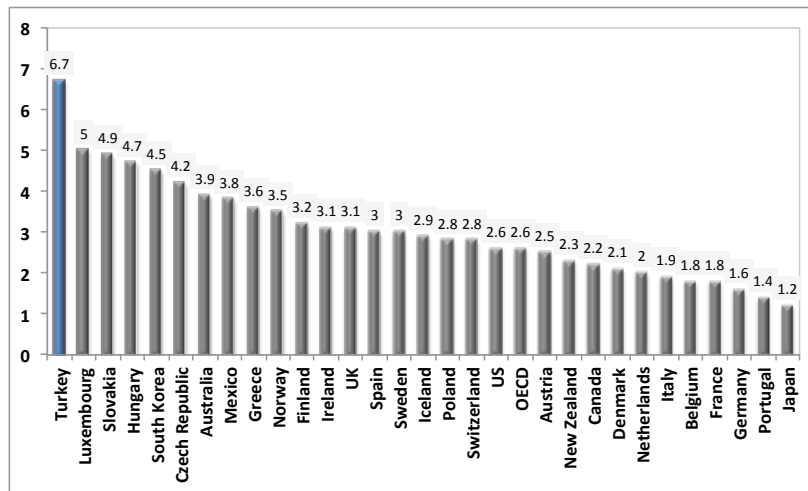
Unemployment rate of Turkey - Seasonally adjusted data



Source: Turkish Statistical Institute (TurkStat), 2011

Figure 5. Unemployment rate of Turkey (2005-2012)

Turkey stands as the 16th largest economy in the world and 5th largest economy compared with the European Union (EU) according to GDP figures (at PPP) in 2011. The visible improvements in the Turkish economy have boosted foreign trade, while exports reached USD 135 billion by the end of 2011, up from USD 36 billion in 2002. Similarly, tourism revenues, which were around USD 8.5 billion in 2002, exceeded USD 23 billion in 2011. According to OECD, Turkey is expected to be the fastest growing economy among OECD members during 2011-2017, with an annual average growth rate of 6.7 percent. [20]



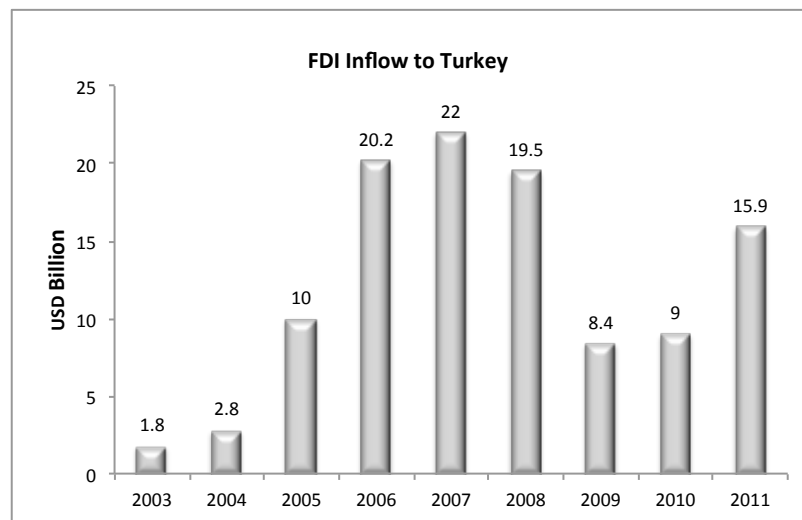
Source: OECD Economic Outlook No: 86

Figure 6. Forecast in OECD Countries (2011 – 2017)

Turkey managed to attract USD 15.7 billion of foreign direct investment (FDI) in 2011, despite the economic and political volatility raging around it. The amount of investments channeled into Turkey, including real estate acquisitions and loans injected into local firms from foreign partners, has increased by 74 percent over 2010.

Surpassing the USD 10 billion-threshold by a large margin, last year’s FDI total is the highest amount recorded in the past three years, following the outbreak of the global financial crisis in the second half of 2008. Net FDI inflow dropped sharply to less than USD 7 billion from 2008’s USD 17 billion before climbing up to USD 7.5 billion the following year.

Turkey ranks as the world’s 13th most attractive destination for Foreign Direct Investment (FDI) in 2012, according to the A.T. Kearney FDI Confidence Index.[21]



Source: Central Bank of the Republic of Turkey, 2012

Figure 7. Foreign Direct Investment inflow to Turkey (2003-2011)

Institutionalized economy fueled by USD 110 billion of FDI in the past nine years and 13th most attractive FDI destination in the world. Turkey’s credit ratings have been in short intervals as a consequence of policies pursued against the global crisis and the resilience demonstrated by the economy. The risk premium indicators of Turkey have fallen below of several developed economies and Turkey has become a country perceived as low-risk by investors. Number of companies with International Capital had been increased significantly between 2003 until 2011 according to data taken from Central Bank of Republic of Turkey. As of the end of 2011, around 30,000 companies with foreign capital operate in Turkey.

Turkish Republic the Ministry of Economy and Turkish Exporters Assembly was initiated “Turkish Exports Strategy for 2023” in 2009. The main purpose of this strategy is to reach 500 billion dollars of exports volume in 2023, with an average of 12% increase in exports annually. Furthermore, it is planned to reach 80% exports/imports ratio in 2023.

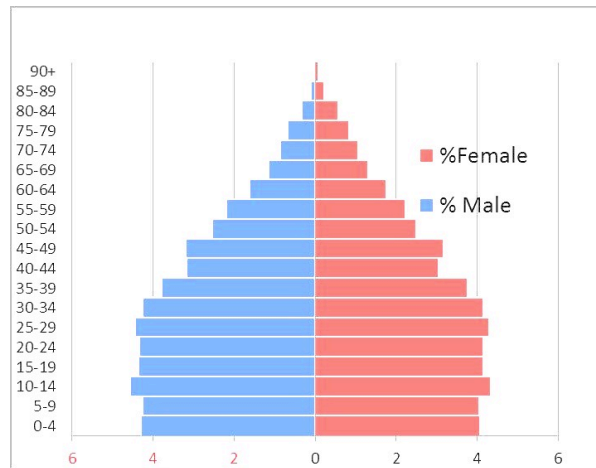
The major exports in Turkey are listed as textiles and clothing, automotive, iron and steel, white goods and chemicals, pharmaceuticals and ships. Turkey imports mainly machinery, chemicals, semi-finished goods, fuels and transport equipment. Its main trading partners are: European Union (57% exports, 40% imports), Russia and The United States. Main export partners of Turkey, according to the data taken in 2011, are listed as Germany, Iraq, UK, Italy and France, while the main import partners are Russia, Germany, China, USA and Italy. [22]

Social

Turkey has been analyzed from social perspective considering the population demographics, income distribution, social mobility, lifestyle changes, attitude to work and leisure and the levels of education. During the last two decades there has been a significant improvement in Turkey's social indicators. Infant mortality rates have fallen sharply. Literacy rates have climbed. Life expectancy has reached respectable levels for both men and women. And both economic vulnerability and absolute poverty have fallen.

The official language of the Republic of Turkey is Turkish. Throughout history, Gokturk, Uighur and Arab alphabets were used and after the establishment of the Republic of Turkey, a transformation was made to the Turkish Alphabet, prepared according to the vowel structure of Turkish, with the Alphabet reform made in 1928. Besides Turkish, a significant part of young generation speaks English or German as a foreign language. [24]

According to the Turkish Statistical Institute (TurkStat) the population of the Republic of Turkey is approximately 75 million as of December 2011 and the half of the population is under the age of 29.7. The Eurostat statistics state that Turkey has the largest youth population compared with the countries in European Union. 67% of the population of Turkey is between ages 15-64 [25]



Source: Turkish Statistical Institute (TurkStat) and United Nations (UN), 2011

Figure 8. Population of Turkey by age group and sex (% of total population) on 2010

Turkish Statistical Institute (Turkstat) data based on the Address-Based Population Registration System (ADNKS) puts the rate of growth of the population at 1.31 percent in 2008, 1.45 percent in 2009 and 1.60 percent in 2010. No official explanation has been given for the uneven and rising rate of population growth, but it appears to stem mainly from the inclusion in the population of persons not previously identified by the system.

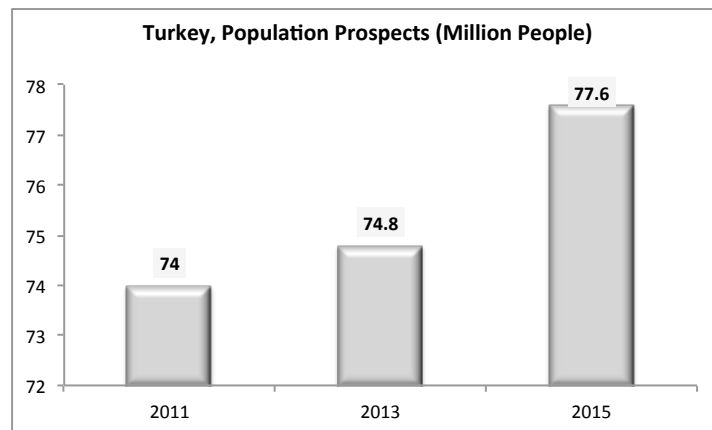


Figure 9. Population Prospects of Turkey (2011-2015)

The gradual decline in fertility, population growth and the proportion of young children in the population shows important geographical variations in Turkey. While it is falling in all regions, fertility remains much higher in some places than in others. This means that there remain regions and sections of society in which population growth is rapid, the average age is low and the numbers of children remain very high compared to the population as a whole – a situation which tends to

stretch the resources of families, communities and the public authorities alike. In the Southeast and some Eastern provinces, under-eighteens make up 40-50 percent of the populace, whereas in several smaller provinces in western Turkey this ratio falls to 20-25 percent. [26]

Distribution of income among people in a country is as important as income generation and economic growth. Some macroeconomic factors influence income distribution such as economic growth, inflation, budget spending and foreign trade. The average annual disposable income per household in 2010 is 22,063 TL, which is approximately 12,127 USD. The distribution of household annual disposable income by quintiles, in Turkey 2009-2010 is demonstrated on the Table 2.

Distribution of household annual disposable income by quintiles, 2009-2010						
Quintiles	Turkey		Urban		Rural	
	2009	2010	2009	2010	2009	2010
Total	100.0	100.0	100.0	100.0	100.0	100.0
First quintile ⁽¹⁾	5.6	5.8	6.0	6.3	6.1	6.2
Second quintile	10.3	10.6	10.7	11.0	10.9	11.0
Third quintile	15.1	15.3	15.0	15.3	15.9	15.7
Fourth quintile	21.5	21.9	21.1	21.6	23.1	22.8
Fifth quintile ⁽²⁾	47.6	46.4	47.3	45.7	44.0	44.3
Gini Coefficient	0.40	0.38	0.39	0.37	0.37	0.38
⁽¹⁾ It has lowest share of total income						
⁽²⁾ It has highest share of total income						

Source: Turkish Statistical Institute (TurkStat), 2011

Table 2. Distribution of household annual disposable income by quintiles, in Turkey 2009-2010

According to the statistics taken from Eurostat on 2011, in Turkey, the average working hours per employee is 52.9 hours worked per week while the average sick days per employee in a year is 4.6 sick days. So that Turkey has the longest working hours, and the lowest sick day leaves compared to Europe.

Ministry of National Education is responsible for formal education that includes pre primary, primary, secondary and tertiary educational institutions. Higher education institutions are; Universities, Faculties, Institutes, Conservatories, Research and Application Centers. [27] The extensive and disciplined education system of Turkey underwent serious reforms in the last decade, like the compulsory eight-year education, improvement of the overall quality of the Turkish education system, as well as the increase in the number of schools and related establishments. [28]

Education Net Ratio	2009	2008
Higher education schooling net ratio (%)	27.7	21.1
Primary education schooling net ratio (%)	96.5	97.37
Secondary education schooling net ratio (%)	58.5	58.56

Source: Turkish Statistical Institute (TurkStat),

Table 3. Primary, Secondary and Higher education net ratio in Turkey (2009-2010)

More than 700,000 high school graduates with around half from vocational and technical high schools (2011, Ministry of National Education) Around 3 million students in tertiary education. Student Selection and Placement Center (OSYM) notifies that approximately 500,000 students graduate annually from over 160 universities in Turkey. [29]

Technological

Technological analysis is mainly composed of the technological effort of the country, government expenditure on research and development, new findings and the speed of technology transfer.

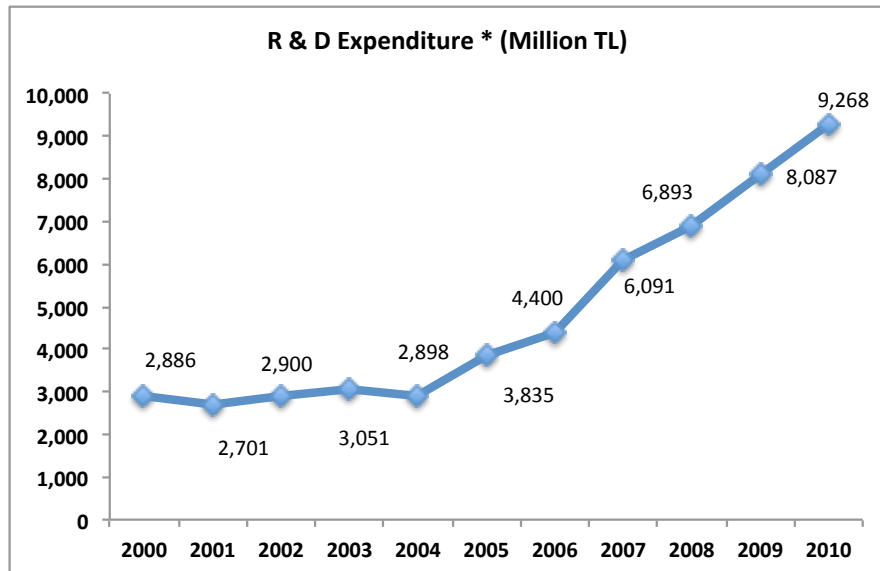
The primary institution responsible for national science and research policies in Turkey is the Scientific and Technical Research Council of Turkey (TUBİTAK). This agency was established in 1963 with a mission to advance science and technology conduct research and to support Turkish researchers. The Council is an autonomous institution and is governed by a Scientific Board whose members is selected from prominent scholars from universities, industry and research institutions.

TUBİTAK acts as an advisory agency to the Turkish Government on science and research issues, and is the secretariat of the Supreme Council for Science and Technology (SCST), the highest science and technology policy making body in Turkey. It directly reports the Prime Ministry of Turkey. TUBİTAK is responsible for promoting, developing, organizing, conducting and coordinating research and development in line with national targets and priorities. Higher Council of Science and Technology (BTYK) set up in 1983, is the highest policy-making and consultative body in the fields of science and technology.

TUBİTAK is collaborating with universities, private sector companies, Non Governmental Organizations (NGOs), State Planning Organization (SPO) and other public agencies within Turkish Research Area. [30]

According to the data taken from Turkish Statistical Institute (TurkStat), TUBİTAK and OECD the number of full time equivalent research and development personnel increased by 154% between 2002-2009 in Turkey. According to TUBİTAK, the number of scientific publications increased by

142 % between 2002 and 2009. According to World Intellectual Property Indicators Report (WIPO), the number of international patent applications increased by 465% between 2002-2010. [31]



Source: Turkish Statistical Institute (TurkStat), 2011

Figure 10. R & D Expenditure on 2011

National Science, Technology and Innovation Strategy of Turkey from 2011 until 2016 is developed with the mission of contributing new knowledge and develop innovative technologies to improve the quality of life by transforming the former into products, processes, and services for the benefit of the country.

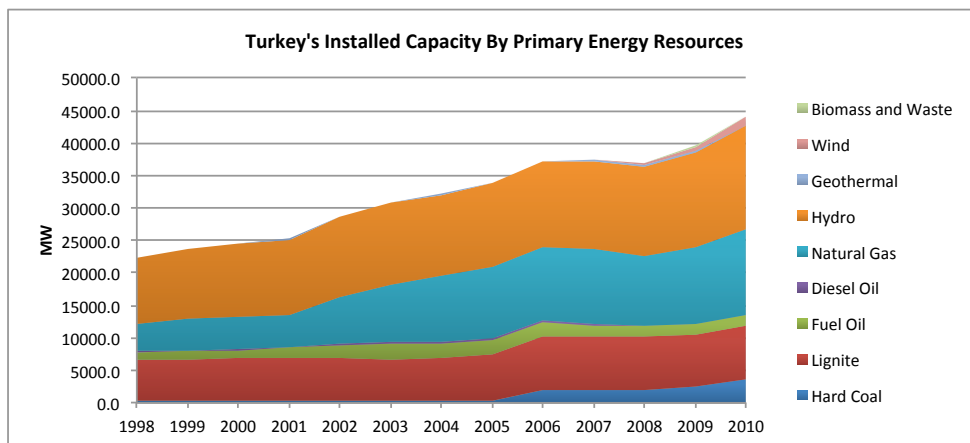
Environmental

There is a close connection between energy, the environment and sustainable development. [32] Economic growth in Turkey has caused an increase in energy demand, industrialization and urbanization, thus it leads raising concerns about environmental issues. In this perspective an outlook to the energy situation in Turkey considering the installed primary energy sources, the forecasted energy need until 2030, the potential of renewable energy sources, governmental actions to encourage investors to invest in renewable energy projects, information about the adaptation progress according to EU environmental legislation has been provided within the “environmental” part. The environmental policy and regulations are considered as a crucial point for deep understanding of the energy situation in Turkey. Moreover an outlook for air quality, hazardous and solid waste management, water and wastewater management has been included.

The Republic of Turkey forms an energy corridor between the countries with rich hydrocarbon resources and those with energy consuming markets because of its location. Turkey’s general energy strategy is to become a transit state on the East-West and the North-South axes. Turkey aims to diversify energy sources in order to establish the security of energy supply and to utilize domestic resources in the most efficient way. [33]

Turkey’s primary energy sources include hard coal, lignite, oil, natural gas, hydro, geothermal, wood, animal and plant wastes: solar and secondary energy sources are coke and briquettes.

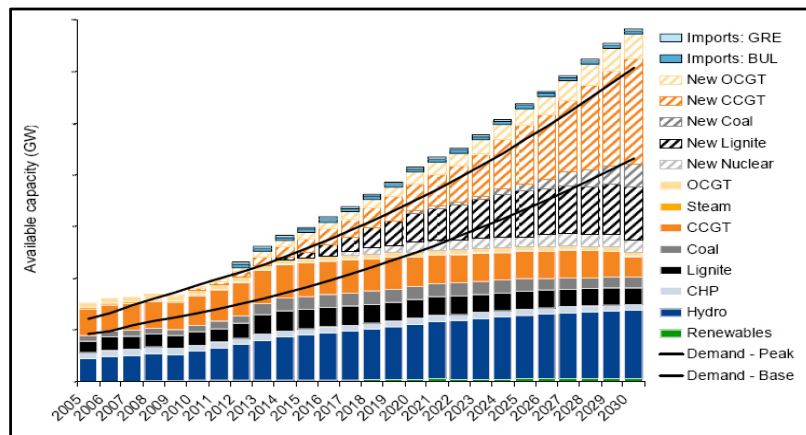
Turkey is a large importer for primary energy. Turkey’s economy is especially dependent on imported oil and natural gas. Half of the Turkey’s energy usage is currently oil, but natural gas usage increases. In the figure below the installed capacity by primary energy sources by the end of 2010 is demonstrated.



Source: TEIAS

Figure 11. Installed Capacity by Primary Energy Resources in Turkey (1998- 2010)

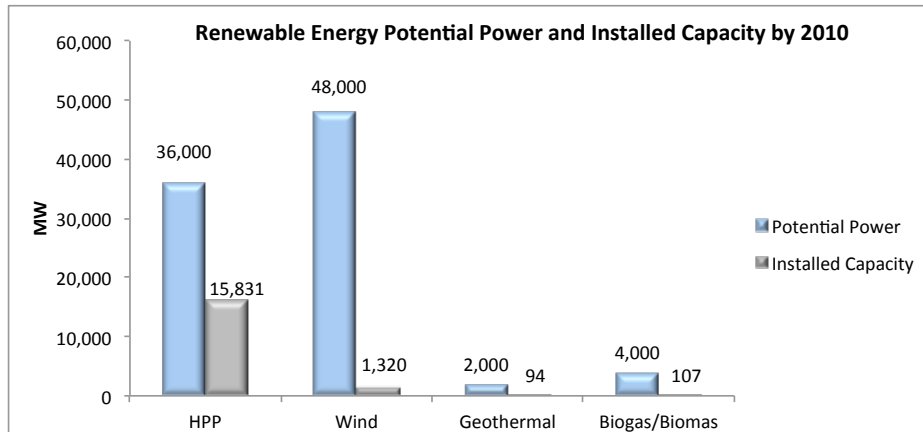
According to estimation from Turkish Electricity Transmission Company, Turkey’s demand for electricity will increase at an annual rate of 6 percent between 2010 and 2023 while the average annual increase expectation for the world is 1.8%. It is expected that by 2020 in Turkey the primary energy production will be 81 Mtoe, while primary energy consumption will be 308 Mtoe. The total amount of investments to be made to meet the energy demand in Turkey until 2023 is estimated around USD 130 billion. In this perspective, Turkish energy sector is widely seen as the most promising and attractive investment area in the Turkish economy. The following figure reports Turkey’s energy production and demand forecast by sources.



Source: Turkish Statistical Institute (TurkStat)

Figure 12. Turkey's Energy Production and Demand Forecast by Sources (2005-2030)

Given such limited natural resources, Turkey must import most of the energy to meet her need. The significant increase in demand has risen to the long-term investments from the private companies. Turkish government supports investors to implement energy projects especially on the renewable energy sector. Thus, as a result it is possible to say that the government's feed-in tariff will accelerate investment projects in the coming years. Turkey has a proven large potential for renewable energy investment projects. The decreasing oil, natural gas and hard coal resources together with the pollution that is caused by these primary energy resources are leading the world to search for alternative energy sources. Turkey has significant potential for solar, geothermal and wind energy and with the stimuli from government it is in the stage to take necessary actions towards utilizing these potential. In the figure below renewable energy potential power and installed capacity by the end of 2010 is demonstrated.



Source: EPDK, TEİAŞ, Dec 2011

Figure 13 Renewable Energy Sources, Installed capacity and Potential power in Turkey, 2010

Turkish energy sector gives priority for realizing energy market reforms and adapting the national energy legislation fully with the EU energy legislation in the last decade. The primary objective of the energy policy is to provide energy in a continuous, high quality and reliable manner with the minimum cost in a competitive free market. Fundamental laws in the energy sectors have been completed to a significant extent and efforts for establishing a fully competitive energy market are continuing.

Within this perspective, Ministry of Energy and Natural Resources of Turkey has set ambitious targets on 2009 for the energy sector to be accomplished until 2023. [34] It includes several objectives as it is described below:

- 125,000 MW of installed power (up from 54,423 MW in 2010)
- Increasing the share of renewables to 30 percent
- 60,717 km of transmission lines (up from 49,104 km in 2010)
- 158,460 MVA of power distribution unit capacity (up from 98,996 MVA in 2010)
- Decreasing electricity loss-theft to 5 percent and extending the use of smart grids
- 5 billion m³ of natural gas storage capacity (up from 2.6 billion m³ in 2010)
- Establishing an energy stock exchange
- Construction of 4 nuclear reactors with a capacity of 5,000 MW
- Construction of power plants with a capacity of 18,500 MW in the coal basins
- Full utilization of hydropower
- Increasing wind power to 20,000 MW (up from 1,320 MW in 2010)
- Power plants with 600 MW geothermal, 3,000 MW solar energy
- 20% reduction in primary energy intensity by 2023

Facilitating the utilization of renewable energy sources potential and increasing market share of renewable based electricity generation are crucial elements of Turkish energy policy. To this end, to meet the increase of 30% of renewable energy generation target, there are supporting mechanisms and incentive schemes for renewable sources of electricity such as feed-in tariffs, purchase obligation, connection priorities, license fees discounts and exemptions and various practical conveniences in project preparation and land acquisition have been defined in relevant laws and regulations. [35] With the Amendment to Law on Utilization of Renewable Energy Resources for the Purpose of Generating Electrical Energy, which was published in the Official Gazette on January 2011, new feed-in tariff levels differentiated in a cost-reflective manner for different renewable energy sources and technologies have been introduced. Namely, for hydro and wind 7.3 cents/kWh; for geothermal 10.5 cents/kWh and for solar and biomass 13.3 cents/kWh will be provided if the investors prefer to sell their electricity to public. In addition, a certain support of 0.4 to 3.5 cents/kWh will also be provided to the plants those utilize domestically manufactured technical equipments. The amendment also covers the rules for certification of renewable-based electricity generation. Large hydropower is already competitive to conventional fossil-based electricity, so feed-in tariffs in the new renewable energy law are set to facilitate expanding the deployment of other, less mature renewable energy technologies. [36]

One of the key agenda items of Turkey's energy sector is to increase efficiency in all processes from generation to transmission, from distribution to consumption of electricity; to prevent extravagation and to reduce energy intensity at both sectorial and macro levels. In Turkey many energy conservation and efficiency improvement programs have been developed to reduce pre- sent levels of energy consumption. [37]

The Energy Efficiency Law, adopted in 2007, sets the rules for energy management in industry and in large buildings, project support, energy efficiency consultancy companies, voluntary agreements, etc. It affects industry, power plants, transmission and distribution systems, buildings, services and transport. With this law, 20 percent of total energy costs will be covered with the contract signed between industrial companies and EIE.

The regulation on increased energy efficiency in the use of energy resources and energy, enforced in 2009, put in place authorizations and certifications for universities, engineering organizations and energy consultancy companies to support energy efficiency projects in industry through voluntary agreements. [38]

Turkey is faced with increasing pollution levels, due to chemical and detergent contamination of water sources and a concurrent increase in air pollution, mainly in urban areas. The environmental concerns are forcing Turkey to establish effective water, waste and air pollution control management. The Ninth Five Year Plan 2007-2013 has set the goals to provide more effective technical and financial consultancy services to Municipality in the implementation of urban infrastructural investments. A core municipal infrastructure is related to transportation, water, wastewater and solid waste management.

Structural improvements have been made to Turkey's administration of environmental legislation for pollution prevention, covering many environmental fields, such as water and wastewater treatment, air pollution control, and waste management on the accession phase of Turkey to the European Union. In enforcement of environmental regulations, extensive upgrading has been also done on sludge management, which is still included in the priority list. Further efforts have also been in progress in many areas, including industrial and hazardous waste management.

The Ministry of Environment and Forestry (MEF) is mainly responsible for environmental legislation and policy development in Turkey.

In Turkey 413 Municipalities are served by a drinking water treatment plant, which represents 47% within the drinking water network. Currently, all of the potable water treatment plants are based on conventional techniques.

Turkey's waste management infrastructure is not sufficient to cover the country's needs; an annual amount of 30 million tons of waste is produced. [39]

The major part of this waste is stored in municipal waste storage facilities and landfills. Existing landfills and waste energy plants are insufficient. Izaydas, which owned the first facilities for waste management, is the major waste energy plant in the country. Although municipalities have established several facilities in recent years, the number of waste energy plants is still insufficient and should be further developed in the future. Therefore, expertise for managing and constructing landfills and waste energy plants is needed in order to manage the current levels of waste production. Supply of waste handling equipment, technologies for treatment, collection, separation and handling are also areas with extensive development opportunities and therefore offer investment options in the country.

Municipal water and wastewater treatment is the most emphasized area among others. Proper wastewater treatment is still low in Turkey and there still are small cities without any treatment

facility. Although current public spending is low, there is a large potential for development due to scarce treatment facilities.

Industrial CO₂ emissions, household heating and carbon emissions from vehicles are the three main sources of air pollution in Turkey.

Main obstacles in sustaining an acceptable level of air pollution are highlighted as follows

- Low cost, low quality coal usage in household heating
- Inefficient use of energy in industrial production
- Lack of emissions controls in thermal power plants

Since the air quality of Turkey needs to develop, it is expected that, there will be long term opportunities for providers of air quality control testing stations, with resulting requirements for emission control devices, electronic displays, and monitoring devices. [40]

In Turkey waste-to-energy projects have been initiated with an aim of generating alternative energy at some landfills. Municipal water/wastewater treatment is developing faster than the other areas of the sector since all the municipalities are not connected to a wastewater treatment plants (WWTP) across Turkey. For that investment amount for drinking water treatment plants; wastewater treatment plants and municipal solid waste treatment facilities are increasing in the recent years. Furthermore, by the adoption of EU Directives, it is foreseen that plenty of the existing infrastructures have to be undergone rehabilitation or maintenance.

There are difficulties about getting approval for incineration plants to obtain energy from solid waste, which create problems for establishing and widening waste to energy concept. The reasons for the low level of waste treatment in Turkey are listed as the lack of landfills, storage for solid waste and solid waste handling equipment. The construction of landfills and storages is expected to start in the upcoming years. [41]

Renewable Energy and Energy Efficiency Statistics in Turkey

In Turkey accurate data regarding renewable energy and waste statistics; energy density and energy efficiency indices are obtained from by Turkish Electricity Transmission Company (TEIAS) [42] and from Turkish General Directorate of Energy Affairs. Renewable Energy and Waste Statistics include annual generation, consumption, import-export and stock information. The statistics are prepared annually by using survey and administrative sources within Turkey. This information, surveys and administrative records and are available on the official website of Republic of Turkey, Ministry of Energy and Natural Resources [43]

Energy balance sheets, prepared by the Turkish General Directorate of Energy Affairs according to production, consumption, import-export, stock information, and energy consumption data by sector composed. This information, surveys and administrative records and are also available on the official website Republic of Turkey, Ministry of Energy and Natural Resources. General Directorate of Electrical Power Resources Survey and Development Administration prepare “Energy Consumption in the Manufacturing Industry” according to Energy Efficiency Law. This study exposes the energy consumption characteristics, which are over 1000 tons of oil equivalents of the industrial enterprises. The frequency of data collection and publishing are annual for both subjects. [44]

Subject	Responsible Organization	Related Organization	Data Collection Method
Renewable Energy and Waste Statistics	<ul style="list-style-type: none"> Ministry of Energy and Natural Resources 	<ul style="list-style-type: none"> Turkish Statistical Institute Tobacco and Alcohol Market Regulatory Authority 	<ul style="list-style-type: none"> Survey, Administrative Source
Energy Density and Energy Efficiency Indices	<ul style="list-style-type: none"> Ministry of Energy and Natural Resources 	<ul style="list-style-type: none"> Turkish Statistical Institute 	<ul style="list-style-type: none"> Administrative Source

Source: Turkish Statistical Institute (TurkStat), May 2011

Table 4. Renewable Energy and Energy Efficiency Statistics in Turkey

4. MARKET ANALYSIS OF TURKEY

The market analyses include the general outline of the client analysis on the targeted market, highlighted information about their existing projects, priority analysis according to the client's potential. Moreover a further outline has been provided about the "free zones", organized industrial zones and the relevant business associations that meet with MWH's interests in Turkey. It is crucial to gain a deep understanding of the potential clients in order to capture the demand and to increase the market share. A comprehensive market analyze has been performed including the potential client analysis, generation of segments within the industry dynamics and trends.

4.1. Analysis of Clients in the Targeted Market

The potential client portfolio of MWH Global has been targeted considering energy, water, wastewater, infrastructure and environmental sectors. MWH Turkey client dynamics consist of international financing institutions, government authorities, private multinational and local companies.

International financing institutions

International financing institutions are offering frameworks mainly in water, energy, waste and infrastructure sectors through numerous projects in emerging markets. The main international financing institutions that are active in Turkish market are European Commission, European Bank for Reconstruction and Development (EBRD), World Bank (WB), KfW BankenGruppe, French Development Agency (AFD). MWH has been carrying out several projects with international institutions by providing technical consultancy. International institutions are providing advantage with their secured budget for the projects. Governmental authorities such as water utilities in Ankara and the private clients are important targeted clients for MWH Turkey in order to increase the market share.

International Financing Institutions
• European Commission (EU funds)
• European Investment Bank (EIB)
• European Bank for Reconstruction and Development (EBRD)
• World Bank
• KfW BankenGruppe
• French Development Agency (AFD)
Government Authorities
• Republic of Turkey Ministry of Forestry and Water Works
• Istanbul Water and Sewerage Authority (ISKI)
• Ankara Water and Sewerage Authority (ASKI)
• General Directorate of State Hydraulic Works (DSI)
• Ministry of Transportation

Table 5. Major Potential Clients for MWH in Turkey

International financing institutions are mainly seeking for international expertise and a competent technical team in order to perceive a high quality engineering consultancy services delivery for their projects. MWH has been working with international financing institutions in several locations worldwide so that the project experience lead to quick adaptation for execution of the projects and brand recognition can create a competitive advantage. In addition MWH is executing the projects according to the international standards and regulations that could create an added value for the projects. Moreover participating the tenders of the international institutions may lead to obtain wins in medium and short terms. An overview of the international institutions that are considered as potential clients for MWH in Turkey is provided below.

- **European Commission (EU funds)**

Republic of Turkey has been receiving EU financial aid under the Instrument for Pre-accession Assistance (IPA) since 2007. [45] IPA assistance to Turkey is implemented under decentralized management according to the five IPA components available to candidate countries. As regards financial assistance, €654 million have been earmarked for Turkey from the Instrument for Pre-accession Assistance (IPA) in 2010. This amount increased to approximately €780 million on 2011.

[46]

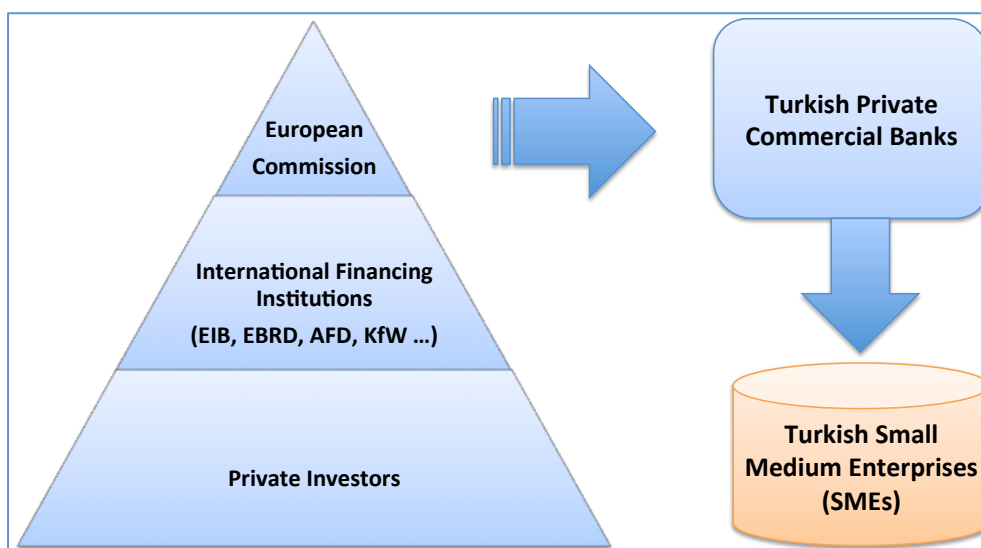


Figure 14. European Fund Structure in Turkey

EU grant funding has been used in support of micro small and medium enterprises (MSME) lending to remote regions and for energy efficiency operations. Means for leveraging EU funding for municipal operations, particularly water, waste water and solid waste management have been explored. Green for Growth Fund (GGF), Southeast Europe provides refinancing to financial institutions for on lending to enterprises and private households for financing energy efficiency projects. The Fund makes direct investments in specialist energy service companies (ESCOs), energy service and supply companies and renewable energy projects. The overall term of the project is from 2009 to 2014. Investors are European Commission, German Federal Ministry of Economic Cooperation and Development (BMZ), European Investment Bank (EIB), KfW Entwicklungsbank (The German Development Bank), European Bank for Reconstruction and Development (EBRD), IFC. Target partner countries are Albania, Bosnia and Herzegovina, Croatia, FYR of Macedonia, Montenegro, Serbia, Kosovo, and Turkey.

- **European Investment Bank (EIB)**

EIB has been financing projects in Turkey since 1965. The EIB's mission is to support the country's economic development during its pre-accession phase to the EU. The EIB achieved total lending volume exceeding EUR 11bn in Turkey over the 5 years to end 2010. The level of EIB lending increased dramatically from 2005, with the opening of accession negotiations at the end of 2004. Turkey is the largest recipient country of EIB funds outside the EU. The EIB cooperates closely with the European Commission and the Turkish authorities in defining priority investments in line with national development plans and EU.

In order to underpin the country's economic development, there is a special focus on transport, energy; including renewables and energy efficiency, the environment and the financing of SMEs through a wide network of public and private sector partner banks.

In the graph below the EIB loans signed in Turkey between 2007 and 2010 is demonstrated. EIB Loans signed in Turkey from 2006 to 2010 reaches the total amount of EUR 9.4 Billion.

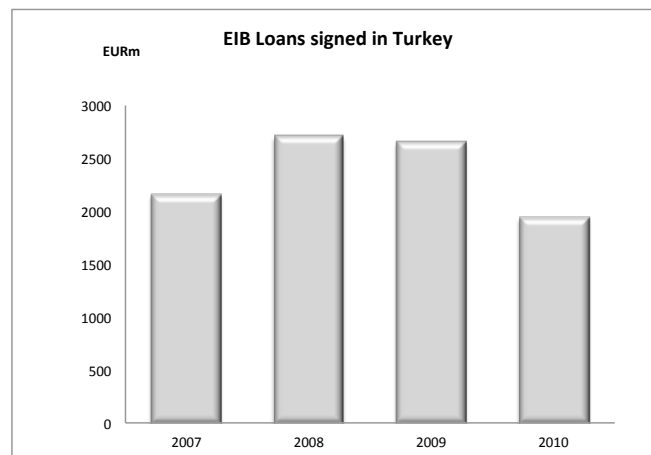


Figure 15. EIB Loans signed in Turkey (2007-2010)

EIB annual lending activity in Turkey is based on main three pillars that are; lending in support of critical infrastructure projects, both at national level (transport sector, energy, the environment, R&D) and local level (water and wastewater management, urban transport); lending to small and medium enterprises (SMEs), through an extensive network of both private and public partner banks; and corporate lending, mainly in favor of the energy sector and in support of foreign direct investments. European Investment Bank has launched the Environment and Energy Framework Loans that are Environment & Energy Mid-Cap Facility and Environment and Energy Framework Loan II facility. Environment & Energy Mid-Cap Facility is dedicated to financing small and medium scale (up to EUR 50 million in projects costs) investments in environment and energy sector, including renewable energy, pollution abatement, natural gas distribution and energy efficiency projects. The institution is European Investment Bank while the beneficiaries are with EUR 50 million Development Bank of Turkey and with EUR 150 million The Industrial Development Bank of Turkey (TSKB). The duration of the project is 15 years starting from 2008. [47]

- **European Bank for Reconstruction and Development (EBRD)**

The European Bank for Reconstruction and Development (EBRD) began operating in Turkey in 2009 with a project office in Istanbul. EBRD aims to increase availability of risk capital and long-term funding to the micro, small and medium sized (MSMEs) enterprises. The main areas of focus in Turkey are sustainable energy, agribusiness, improving utilities to residents outside of the main urban centers and support for privatization.

As at end-February 2012, the Bank had signed a total of 55 projects with cumulative investment value of close to Euro 1.6 billion since initiating operations in 2009. Total project value of these investments was just under Euro 5 billion. Fifty five per cent of cumulative projects signed since the start of operations was in financial institutions.

The EBRD is planning to open a new office in Ankara in 2012, which will focus on supporting the public-private sector dialogue in areas such as renewable energy, food security and capital market development.

The Bank aims to promote favourable market conditions for the development of energy efficiency and renewable energy through its investments. This will support the government's privatisation programme in the enterprise and financial institutions sectors.

The main sectors that EBRD focused in Turkey are defined as (i) Liberalization and privatization (ii) Business environment and competition (iii) Power and energy (iv) Municipal sector infrastructure (v) Telecommunication (vi) Financial sector

EBRD's level of business in Turkey increased to more than €900 million, of which almost one-half was provided through banks during 2011.

Around 50 per cent of business to date in Turkey has promoted the objectives of the EBRD's Sustainable Energy Initiative (SEI). This has included a loan to a large wind farm project and loans to partner banks under two frameworks, one in support of small-scale energy efficiency projects and the other in support of mid-sized renewable energy projects. In March 2011, a Sustainable Energy Action Plan was signed with the government agreeing priority areas for EBRD's investment and supporting the launch of technical cooperation (TC) activities. Subsequent TC activities have included a municipal and industrial waste-to-energy market assessment, geothermal energy market assessment, smart metering roll-out strategy, an Energy Service Company (ESCO) market potential study, and a private sector climate change adaptation study.

In its strategy for Turkey (approved in April 2012) the EBRD’s activities will remain focused on those areas where the transition gaps are significant and where the Bank’s finance and expertise are additional to what commercial and non-commercial funding sources can provide. Focus will be given to developing sustainable energy (including support to on-going reforms of the energy sector through policy dialogue), promoting the development of MSMEs, enhancing the competitiveness of Turkish industry, and promoting market approaches toward investment in municipal infrastructure. The EBRD will also support the Turkish government’s privatisation programme in the enterprise, financial and infrastructure sectors. Highlighted information about the EBRD’s work in Turkey is given on the table below.

Number of projects of EBRD in Turkey	46
Net business volume	€1.5 billion
Total project value	€4.9 billion
Gross disbursements	€1.4 billion
Portfolio in private sector	95%

Table 6. Key facts about the EBRD projects in Turkey

In 2012, The Board of Directors of EBRD has approved a new country strategy for Turkey, which will define the Bank’s activities in the country for the next three years. EBRD’s activities in Turkey will concentrate on developing sustainable energy, promoting the development of mid-sized corporates in underdeveloped regions, enhancing the competitiveness of Turkish industry, supporting privatization, promoting market approaches toward investment in municipal infrastructure. The Bank will also support Turkey’s further economic integration with Europe and closer economic and trade ties with the southern and eastern Mediterranean countries. [48]

Council of Europe Development Bank

The Council of Europe Development Bank (CEB) has three main fields of action that are strengthening social integration, supporting environmental sustainability and developing human capital. CEB lending in Turkey over the past decade has focused on projects related to natural disaster mitigation, environmental and urban infrastructure, health, education and job creation in small and medium enterprises. Total lending in Turkey from 2002 to date is Euro 1.95 billion, of which Euro 100 million was provided during 2011. [49]

- **World Bank Group**

The World Bank Group is working under its 2012-2015 Country Partnership Strategy (CPS), which was adopted in March 2012. The main pillars of the new CPS are enhanced competitiveness and employment, improved equity and public services and deepened sustainable development. Turkey is one of the largest middle-income partners of the World Bank and is the third largest borrower in terms of active portfolio.

Turkey’s Ninth Development Plan (2007-2013) forms the basis of the partnership between Turkey and the World Bank. In the implementation of the Country Partnership Strategy (CPS) the World Bank provided financing of US\$ 7.6 billion to Turkey. The World Bank committed US\$ 3 billion in financing for Turkey between July 2009 and June 2010. Responding to the Government’s request for continued high levels of IBRD financing, the CPS for FY12-15 provides up to US\$ 4.45 billion in financing.

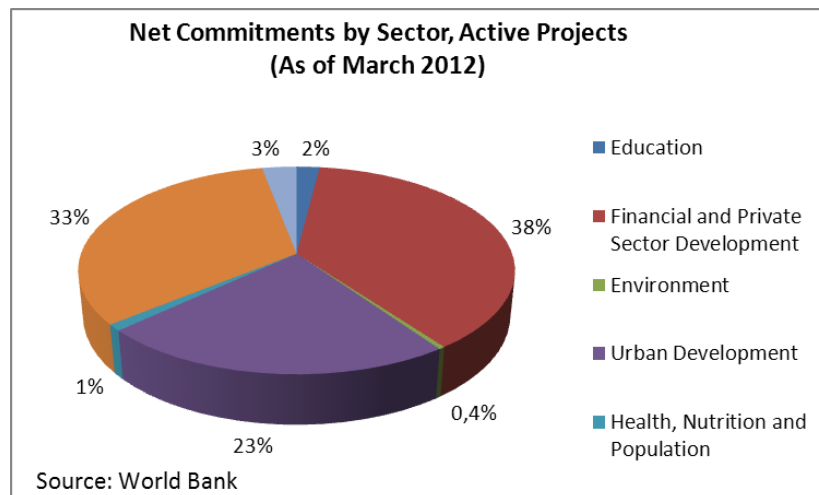


Figure 16. Projects of World Bank in Turkey, March 2012

As of March 2012, the World Bank’s lending portfolio in Turkey included 14 investment projects with total net commitments of US\$5.566 billion. They support financial and private sector development, urban development, the energy sector, transport and health and education. [50]

- **KfW BankenGruppe**

The activities of KfW in Turkey are including municipal environmental infrastructure, small medium enterprises promotion via financial sector, renewable energy and energy efficiency investments. Total Portfolio for municipal infrastructure projects is approximately EUR 1 billion. Renewable energy and energy efficiency projects includes a wide range of technologies however

the major part of the projects are defined as solar power plants especially in the southeastern part of Turkey. There are several credit lines available with a total amount of EUR 110 million. The bank is providing the investment via Turkish Investment Banks such as Industrial Development Bank of Turkey (TSKB). Moreover with the aim of supporting small medium entrepreneurs investing in energy efficiency projects further credit lines are available. Those projects include studies on bankable investments into energy efficiency in private, commercial, and municipal sectors and also energy efficiency in public buildings. Figure 17 demonstrates the framework of “Small Enterprises Loan Programme II”. The initial project volume is EUR 90 Million to be disbursed through four local banks. The loan program has a technical assistance package with the overall amount EUR 3 million.

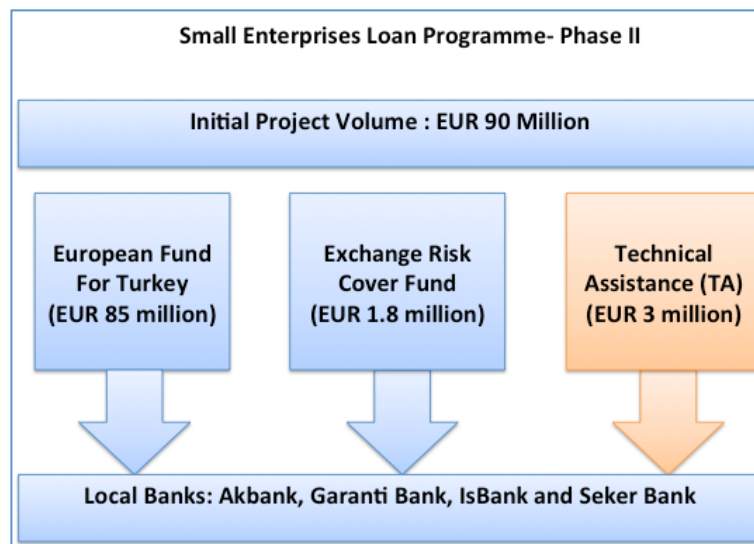


Figure 17. The framework of “Small Enterprises Loan Programme II” from KfW

- **French Development Agency (AFD)**

French Development Agency (AFD) is a public organization whose mission is defined by the French Government. AFD finances and supports the projects aiming to improve living conditions and stimulating economic development. AFD started its operations in Turkey in 2004 and its representative office has opened in Istanbul in August 2005. AFD has various types of operations in Turkey that are medium or long-term loans to public or private companies, private companies, without a state guarantee, loan guarantees in local currency, equity or quasi-equity investments, grants for study funds, project preparation and capacity building, grants from the French Global Environment Fund. PROPARCO is AFD’s private sector financing arm, promotes private investment in emerging and developing countries. AFD is carrying out “Renewable Energy and

Energy Efficiency Facility” in Turkey. The amount of the credit is EUR 50 million and the local partner bank of the project is Industrial Development Bank of Turkey (TSKB).[51]

- **Islamic Development Bank**

The Islamic Development Bank (IDB) has accelerated its operations in Turkey from 2009 and since then it has put in place a total amount of EUR 550 million. This has been provided to five projects, two in transport infrastructure, two for small medium entrepreneurs (SMEs) financing and one for renewable energy.

The main areas where the Islamic Development Bank is carrying its operations are infrastructure development, energy, education and increasing employment.

The objectives of the Islamic Development Bank meet with the strategic objectives of the Turkish government according to its “9th Development Plan”. There is a country partnership strategy has signed in order to plan and organize the operations in the short term. 2010-2013. [52]

Governmental Authorities

The governmental bodies that are on the targeted group of MWH in Turkey are Ministry of Energy and Natural Resources, Istanbul Water and Sewerage Directorate (ISKI), Ankara Water and Sewerage Directorate (ASKI), and General Directorate for Electricity Generation Corporation. Those institutes are in charge of several projects related to environment, water and infrastructure. A brief overview on the governmental authorities is given below.

- **Ministry of Energy and Natural Resources**

The Ministry of Energy and Natural Resources (ETKB) was established upon Presidential Approval on 1963. The sole governmental body that shapes the future of the energy projects either through local or international resources. The ministry of energy and natural resources has set the strategic plan for 2010- 2014. The ministry includes the Department of EU Coordination and Strategy Development Department. The purpose of the foundation is to help define targets and policies related to energy and natural resources. The ministry is assigned for determining the short and long-term needs of the country for energy and natural resources, assisting the detection of required policies, conducting the planning for these. It is responsible from the examination of the energy and natural resources in the interest of the nation, technical needs and economic developments, assisting the determination of the general policy principles for their operation, improvement, evaluation,

control and protection, arranging the required programs, preparing or ordering the preparation of the plans and projects. It is in charge of determining and appraisal of the policies for production, transfer, distribution and consumption prices of the underground and aboveground energy and natural resources and their products. Moreover examining the operation and investment programs of the institutions bound to or related to the Ministry and approving these and monitoring their operations according to annual programs and their evaluation, collecting the required information for carrying out the duties assigned with the legislation, their evaluation and the detection and development of long term policies and carrying out the preparation studies for these are within its responsibility.

- **Istanbul Water and Sewerage Directorate (ISKI)**

ISKI is one of the biggest sovereign water utility body linked to Istanbul Municipality with annual revenues in excess of 1 billion €. They are constantly investing in water, sewage networks and treatment plants in Istanbul to keep up with the demand. The existing and old facilities will soon need refurbishment and upgrade. Majority of the large investment projects are funded by their own sources. [54]

- **Ankara Water and Sewerage Directorate (ASKI)**

ASKI works in the same principle as ISKI and have access to substantial funds for wet infrastructure. Ankara's population is growing very rapidly and more investments will have to be implemented in wet infrastructure. [55]

- **General Directorate for Electricity Generation Corporation:**

General Directorate for Electricity Generation Corporation is an affiliated corporation of the ministry. They are responsible for the electricity production through current technologies and also innovative technologies through renewable resources. [56]

4.2. Analysis of the Private Companies

A qualitative analysis was carried out related to the multinational and local private companies in Turkey with the main intention of obtaining a general market overview. Private companies are clustered according to their current activities. The division was made considering the client portfolio of MWH in South-Europe operations. It includes the sectors such as energy, oil and gas, holdings, constructors, suppliers, electronics, fast moving consumer goods, textile, painting, food, chemicals and local banks.

After a preliminary analysis on the market, the potential private clients list, given on Table 7, was obtained. A set of meetings was carried out using the existing connections in the market in order to identify their potential to collaborate in the medium and short term. After that a “Priority evaluation” was made on time horizon. The high priority is given to those companies that have a considerable collaboration potential in the short term. Medium and low priorities are allocated on the basis of the probability to win projects with the time constraints.

Potential Private Clients			
1. Energy Companies	Priority Evaluation		
	High	Medium	Low
Eren Holding/ Energy		X	
Polat Energy		X	
Akenerji		X	
Karadeniz Energy Group			X
Genel Energy		X	
Dogan Holding/ Dogan Energy	X		
General Electric (GE)	X		
Nuh Energy		X	
Bereket Enerji		X	
Gama Holding (Gama Energy)		X	
Demirer Holding/ ENERCON AERO Wind		X	
SOYAK Energy	X		
RECYDIA (Sustainable Resource Management)			X
Zorlu Energy Group	X		
Agaoglu Energy Group		X	
Enel Green Power		X	
AES		X	

2. Oil & Gas Companies	Priority Evaluation		
	High	Medium	Low
IzmirGaz			X
SHELL	X		
IGDAS Gas Company		X	
Petrol Ofisi		X	
ORPET			X
Demiroren Group	X		
BP		X	
3. Holding Companies			
Kale Holding			X
RWE Turkey Holding	X		
Kiler Holding		X	
Koc Holding	X		
Sabancı Group/ EnerjiSa	X		
Yasar Holding		X	
Anadolu Group	X		
ANEL Holding	X		
Ata Holding		X	
Kibar Holding			X
Eczacıbaşı Holding		X	
Limak Holding	X		
Dogus Group		X	
Naksan Holding			X
Kazancı Holding (AKSA Power Generation)			X
Dedeman Group (Mining)		X	
Sancak Group- Energy		X	
Hattat Holding		X	
Albayrak Holding		X	
4. Construction Works			
CIMSA (Cement Factory)		X	
Nida Construction and Tourism Incorporated Company		X	
Renaissance Construction			X
5. Material- Suppliers			
MMK Atakas Metallurgy (Steel Producer)			X
Ege Fren		X	
Fenis Technical Products			X
Izdemir (Steel Producer)		X	
Ege Enda		X	
Pirelli Turkey- Tyre		X	
6. Electronics			
SIEMENS		X	
Vestel Manufacturing		X	

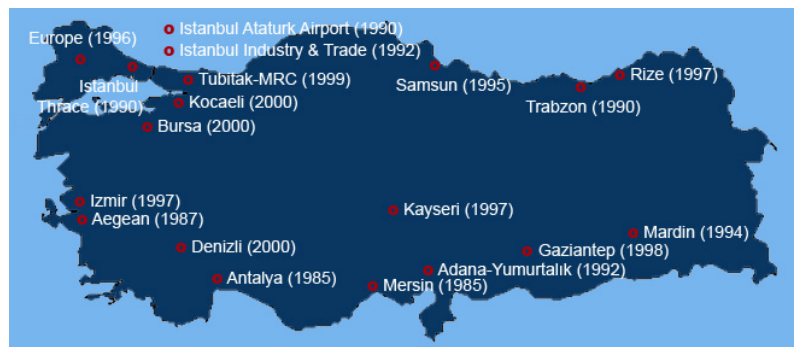
7. Fast-Moving Consumer Goods	Priority Evaluation		
	High	Medium	Low
P&G	X		
UNILEVER	X		
8. Textile			
BOSSA			X
9. Painting			
DYO Paint Factories Industry			X
10. Food Sector			
ULKER			X
Saray (Cattle Farm)			X
Danone		X	
11. Chemicals			
Dow Chemicals	X		
Akzo Nobel		X	
Financial Advisory			
Rothschild			X
PWC Consulting			X
12. Banks			
Eurobank Tekfen			X
Denizbank		X	
Garanti Bank	X		
Vakifbank	X		
FibaBanka		X	
Yapi Kredi Bank			X
Akbank			X
Sekerbank			X

Table 7. Selected Potential Private Clients

4.3. “Free Zones”

Free Zones are defined as fenced-in areas in which special regulatory treatment. The objectives of the “Free Zones” zones are promoting exports of goods and services, accelerating foreign direct investment and technology access, directing enterprises towards export and developing international trade for operating users in order to

Free Zones aim to create a convenient and flexible business climate in order to increase targeted trade volume and export for several industrial and commercial activities compared with the other parts of the country.



Source: General Directorate of Free Zones, Foreign Investments and Services

Figure 18. Demonstration of Free Zones on the Turkish Map

Republic of Turkey, Ministry of Economy, General Directorate of Free Zones, Overseas Investment and Services manage efficiently the free zones that are actively operating in different cities in Turkey. According to the Turkish Ministry of Economy Report published on February 2012, 54.022 people have been employed in Free Zones of Turkey in 2011. Total trade volume of the Free Zones in reached to 18.6 billion USD in 2010. In 2011 total trade volume of the Free Zones reached to 22.7 billion dollars, increasing 22 % annually. So there is a huge capital and potential in the free zones in Turkey. [57]

Free Zones in Turkey	Date of their establishment
Mersin Free Zone	1985
Antalya Free Zone	1985
Aegean Free Zone	1987
Istanbul Ataturk Airport Free Zone	1990
Trabzon Free Zone	1990
Istanbul Thrace Free Zone	1990
Adana Yumurtalik Free Zone	1992
Istanbul Industry & Trade Free Zone	1992
Mardin Free Zone	1994
Samsun Free Zone	1995
Europe Free Zone	1996
Rize Free Zone	1997
Kayseri Free Zone	1997
Izmir Free Zone	1997
Gaziantep Free Zone	1998
Tubitak – MRC Free Zone	1999
Denizli Free Zone	2000
Bursa Free Zone	2000
Kocaeli Free Zone	2000

Table 8. Free Zones in Turkey

4.4. Organized Industrial Zones

Organized Industrial Zones (OIZs) are areas for the manufacture of goods and provision of services with necessary infrastructure dedicated to industry. They are designated for a particular industry under a certain plan. The main objectives for the establishment of OIZs are ensuring efficiency and increased profitability in production by gathering together industrialists working in similar fields, and, as a result, to encourage spin-offs, under a common plan, extending the industry to underdeveloped regions, regulating the use of agricultural land for industrial purposes, establishing a healthy, inexpensive, and reliable infrastructure and common social facilities, protecting the environment by the use of common waste treatment facilities. The zones are designed to be able to govern themselves under state supervision

There are 107 organized industrial zones in Turkey, with their site selection, their expropriation, and their infrastructure completed. Turkey is classified into 7 geographical regions in terms of natural, demographic and economic aspects. The geographical regions of Turkey are the Central Anatolia Region, the Eastern Anatolia Region, the Black Sea Region, the Mediterranean Region, the Aegean Region, the Southeastern Anatolia Region and the Marmara Region. [58] The table below demonstrated the geographical distribution of active industrial zones in Turkey. [59]

Geographical Distribution of Active Organized Industrial Zones in Turkey	
Marmara Region	20
Aegean Region	14
Mediterranean Region	13
Central Anatolia Region	17
Black Sea Region	23
Eastern Anatolia Region	10
South East Anatolia Region	10
Total	107

Table 9. Geographical distribution of organized industrial zones in Turkey

Fields of activities in the OIZs are foodstuffs; beverages; tobacco and tobacco products; textile and clothing; forestry; paper; printing; leather products; rubber; plastics; chemicals; petrochemicals; petroleum products; fertilizers; cement; kiln-dried clay and cement supplies; glass; iron and steel; non-iron metals; metallic, non-electrical machinery; agricultural tools and equipment; optical equipment; professional, scientific, measurement and control equipment; electrical appliances; electronics; land vehicles; railway rolling stock; shipbuilding; aircrafts. According to Code No. 5084 on the Encouragement of Investments and Employment and the Amendment of Certain Acts, investors operating in OIZ's located in provinces with a GDP less than US Dollars 1,500 are eligible for incentive measures that are 100% exemption from income tax calculated on the wages of the workers employed, 100% Treasury subsidy for the employer's share of the workers' insurance premiums and Free land allocation [60]

4.5. Business Associations

In Turkey there are several important business associations and chamber of commerce's actively operating to support international companies to extend their operations in Turkish Market. These associations are well known for their thought-leadership, sector expertise on critical issues related to sustainable development. They provide several services to their members such as advocacy;

business-to-business matchmaking, investment consultancy, sectorial reports plus they organize seminars, conferences on several sectors. These activities are crucial for a company that aims to increase its market share in the Turkey. Expectations from these memberships are connecting with potential clients in a suitable platform, capturing the demand on the targeted areas. Business associations that can be considered as associated with the operations of MWH are listed as; Turkish- American Business Association (TABA / AMCHAM Turkey), US Commercial Service in Turkey, Italian Chamber of Commerce in Turkey, Netherlands Trade Directorate, Turkish Industry, Business Association (TUSIAD). A brief overview of these associations is provided below.

- **Turkish - American Business Association - TABA / AMCHAM TURKEY**

Turkish - American Business Association (TABA) founded in 1987 as a non-profit organization, with head office in Istanbul and 5 branches in Turkey with over 650 members. The main objective of the commerce is to enhance trade relations between the USA and Turkey; to encourage American investments into this country; assist the members by connecting with potential strategic partners. In order to accomplish these goals, TABA/AmCham has founded several task committees composed of her members. These committees are: Membership, Project Development, Telecommunication and Information Technology, Energy and Infrastructure, Law and Finance, Publication, Activities and Communications, Corporate Affairs, Consumer Products, Intellectual Royalty Rights, Trademarks Defense Industry, Tourism, Real Estate and Transportation, Investment and Regulations pertaining to EU relations. The association is well established in Turkish market and through its networking activities it creates a suitable atmosphere for business connections.[61] MWH Turkey is a member of TABA/ AmCham since May 2012 and the Operations Director of MWH is a board member in the association.

- **US Commercial Service in Turkey**

The mission of the US Commercial Service in Turkey is to create and nurture long-term U.S.-Turkish small, medium and large-sized business partnerships through market-focused public and private sector engagements that positively impact the American-Turkish relationship. The services of US Commercial Service include international sales and marketing, international finance, logistics, licenses and regulations. The US Commercial service opportunities offers a wide range of current industry and trade information to help exporters of U.S goods and services find the information they need to compete successfully in overseas markets. The commercial services by organizing trade missions and educational seminars; providing matching or export counseling services at trade shows; and recruiting buyer delegations to U.S. trade shows, the U.S. Government

helps U.S. exporters expand global sales at trade events. The U.S. Government has resources worldwide in Embassies and Consulates that help identify promising trade leads for U.S. exporters. [62] MWH Turkey has existing contacts with the US commercial service since it is an American based company, it is possible to use the advantage of their services that are available only for the companies that have American capital.

- **Italian Chamber of Commerce in Turkey**

The Italian Chamber of Commerce in Turkey is active in Istanbul since 1885. It has always had an important role in the outstanding results reached year by year in trade relationships between Italy and Turkey. The Chamber offers a wide range of services aimed to meet the needs of Italian and Turkish companies looking for starting or consolidating commercial relationships between Turkish and Italian markets. The Italian Chamber of Commerce in Turkey carries out researches to find, select, and evaluate Turkish Industrial partners (joint-ventures). The services provided include providing information about import/export, and on foreign investments laws in Italy and Turkey. The Chamber provides commercial and financial information about enterprises solvency. The Chamber performs commercial partners researches (agents, distributors, representatives, etc.) in Turkey and Italy. Their services include legal and fiscal consultancy and direct marketing services. Moreover they organize seminars and meetings on several topics relevant to the economical and social trends in Turkish and Italian markets. The Chamber is actively supporting its members to participate to the fairs both in Turkey and Italy. There are business match making events as well as trade missions organized on a regular basis. [63] MWH Turkey is a member of Italian Chamber of Commerce since September 2011. There are strong trade relationships between Italy and Turkey so that many of Italian brands are actively operating in Turkish market.

- **Netherlands Trade Directorate**

Netherlands Turkey Trade Directory (NTTD) is a business-to-business internet tool which stimulates and supports business and networking relations among Dutch business community in Turkey. The trade directory of Netherlands came to life as an initiative of the Consulate General of the Kingdom of the Netherlands in Istanbul in January 2010.

The scope covers Dutch origin companies located in Turkey, Turkish companies that have close business ties with the Netherlands and Dutch companies based in the Netherlands that have commercial activities with Turkey. The directory entails detailed member profiles in which a wide range information such as executive names, contact numbers, addresses, sectorial involvement,

company type and number of employees. Moreover, they also provide information on the events of the Dutch Economic Network in Turkey as well as other activities organized by outside parties such as fairs and exhibitions. While the members have the liberty to submit the minimally acceptable information required by the system, we encourage them to build complete profiles by answering all questions and providing thorough and accurate information. [64]

- **Turkish Industry Business Association (TUSIAD)**

Turkish Industry, Business Association is a voluntary based civil society organization established by Turkish industrialists and businessmen in 1971 in order to represent the business world. The association aims to contribute to the formation and development of a social order based on the adaptation of the universal principles of human rights, freedom of thought, belief and action, a secular state of law, as well as the concepts of participatory democracy, a liberal economy, the rules and regulations of a competitive market economy and environmental sustainability. TÜSİAD strives to support entrepreneurial activities in conformity with the universal principles of business ethics. The association aims for progress and enhancement based upon continuous improvements in Turkey's competitiveness, social welfare, employment and productivity, as well as the country's capacity for renewal and the scope and quality of education and training during the globalization process. It contributes to the formation of national economic policies by correctly evaluating regional and sectorial potentials in Turkey's economic and social development.

The association actively contributes to the promotion of Turkey in the global context and supports the EU accession process through efforts to develop international political, economic, social and cultural relations as well as communication, representative and cooperative networks. TÜSİAD conducts research, forms views and develops projects and activities in the context of accelerating international integration and interaction as well as regional and local development. TÜSİAD aims to encourage and develop a unity of thought and action on behalf of the Turkish business world in line with these objectives through the direct and indirect dissemination of its views and recommendations to the Turkish parliament, government, other states, international organizations and public opinion through the media and other means. [65]

5. COMPETITOR ANALYSIS

Competitor analysis complements insights gained from studying industry environments. It is accomplished by understanding a competitor's current strategy, resources and capabilities, critical vulnerabilities and likely competitive moves. In this chapter the dynamics of the competitors for MWH in Turkish market is analyzed to facilitate a broad environmental scanning. There are several international and local companies that are actively operating in Turkish market. The main international and local competitors of MWH in Turkey are listed on the table below.

International Competitors		
Name of the Company	Headquarters	Offices in Turkey
WYG Group	UK	Istanbul, Ankara
COWI	Denmark	Istanbul
Mott MacDonald	UK	Istanbul
Fichtner	Germany	Ankara, Istanbul
Ecory	Netherlands	Ankara
Grontmij	UK	Istanbul
Eptisa	Spain	Ankara
Witteveen+Bos	Netherlands	Ankara
CDM Smith	US	Istanbul
Dahlem Engineering Company	Germany	Mersin and Tokat
IGIP Consulting and Engineering Company	Germany	Istanbul
AF Consult	Russia	Istanbul, Ankara
Pell Frischmann	UK	Istanbul
Local Competitors		
Name of the Company	Headquarters	Offices
Yüksel Proje	Ankara	Istanbul, Kars, Antalya, Samsun, Nigde
Temelsu	Ankara	n.a
Su Yapi	Ankara	Azerbaijan
Tempo	Ankara	Eskisehir, Mersin
Dolsar	Ankara	n.a.

Table 10. International and Local Competitors of MWH in Turkey

International competitors of MWH in Turkey are mainly listed as WYG Group, COWI, Mott MacDonald, Fichtner, Ecorys, Grontmij, Eptisa, Witteveen+Bos, CDM Smith, Dahlem Engineering Company, IGIP Consulting & Engineering Company, AF Consult and Pell Frischmann. Moreover the main local competitors of MWH in Turkey are listed as Yüksel Proje , Temelsu, Su Yapi, Tempo and Dolsar. In order to obtain an overall understanding about their operations in Turkey a brief description about their operations in Turkey are given below.

- **WYG Group**

WYG Group is an international consulting company with its headquarters in the UK. It operates in more than 40 countries with more than 2,000 employees. The consultancy services of WTG cover water, wastewater, solid waste, transportation, energy, defence, education, and risk & assurance sectors. WYG has strong local presence in Turkey with competent professionals and the company has a high visibility in Turkish market. WYG became more active in Turkey further to the acquisition of DeLeeuw International in 2007. WYG International by leveraging on Deleeuw expertise is successfully penetrating the Turkish market especially through EU funded projects concerning capacity building for local institutions for environmental, economic and social integration issues. Deleeuw is also supporting WYG International for pursuing opportunities in the Western Balkans, Middle East, Caucasus and Central Asia market. [66]

- **COWI**

COWI is an international consulting company with headquarters in Denmark. It has local subsidiaries in more than 30 countries; its total personnel number is over 4000. They have been one of the most active international consultants in Turkey in the past years. In 2007, contextually to the award of 2 major EU funded contracts for the preparation of water and wastewater projects for 23 Turkish Municipalities, they decided to acquire one of their local partners, SNS Consult. Currently COWI SNS Müşavirlik ve Mühendislik Limited Şirketi, is bringing local expertise in planning and design of water, wastewater and solid waste management. COWI SNS has offices in Istanbul and Ankara. It is clear that the strategy behind the acquisition of SNS is to target the local market and to serve additional regions such as Western Balkans, Caucasus and Central Asia through the Turkish operations. They have been very active in the Turkish market with the ability to utilize local technical expertise and hence providing low cost engineering capabilities. They have been very successful in penetrating into the Turkish market through SNS acquisition. [67]

- **Mott MacDonald**

Mott MacDonald is one of the world's largest employee-owned companies with over 14,000 staff and presence in 50 countries, headquarters in the UK. The Mott MacDonald Group is a diverse management, engineering and development consultancy delivering solutions for public and private clients worldwide. They have been active in Turkey since 1972, when they provided advisory services on tunneling for the high-speed Esenkent Railway. Today, with a permanent establishment in Istanbul, they are specializing in the country's power, water, transport, education and health sectors. Furthermore they are providing services in management consultancy. [68]

- **Fichtner**

Fichtner is a German company of consulting engineers, mainly active in energy, environment, water, infrastructure, consulting and IT sectors. The main client target of the company is the development banks, commercial banks, private investors and industrial enterprises. Moreover its clients include public institutions such as ministries, local government agencies and research institutes. Another major circle of clients is composed of public and private sector infrastructure service providers such as power companies, municipal utilities, water and sanitation companies, waste disposal enterprises and transport companies. In Turkey, Fichtner has offices in Ankara and Istanbul. The company is operating with local professionals. [69]

- **Ecorys**

Ecorys is an international company specializing in economic and social development. The main services of the company are listed as consultancy and training, programme management and implementation, communication and financing, monitoring and evaluation. Ecorys is active in its home countries of the Netherlands and the UK, the EU and in developing countries. In Turkey, Ecorys is mainly active in capacity building and institutional restructuring fields. The company is mainly providing trainings to Ministries with its office based in Ankara. [70]

- **Grontmij**

Grontmij is a sustainable design, engineering and management consultancy company active in the growth markets of water, energy, transportation and sustainable planning and design. The company has an office in Istanbul. Turkey is one of the focus countries for the company and it has been very active with donor-funded projects in Turkey during the last decade. Grontmij has greatly increased its presence in Turkey since April 2008 and established a fully operational Turkish subsidiary in

Istanbul. The main focus of Grontmij Turkey is to provide engineering consultancy services to the private and public sector within the core competences of the Group and to implement projects funded by international donors. [71]

- **Eptisa**

Eptisa is a Spanish based international engineering, architecture and information technology company, operating in the fields of transport, water, environment, energy and industry. Eptisa is continuously expanding operations in the Balkan area through EU funded projects. According to the strategy of Eptisa, Turkey is an important market and an open door to growth in the countries of the Middle East and Central Asia. Since 2004, Eptisa has been working in Turkey for both the local administration and through multilateral programmes with various beneficiaries. In 2006 a new subsidiary was established based in Ankara, and it has concentrated its services in water, waste, transportation, energy, regional and socio-economic development sectors. Eptisa is supporting the growth of its operations in Turkey by using their competitive advantage of their low-cost capability. [72]

- **Witteveen+Bos**

Witteveen+Bos is an engineering and consultancy firm that provides services in the water, infrastructure, spatial development, environment and construction sectors. They are mainly providing consultancy services for the projects related to marine pollution in Turkey. With the assignment Witteveen+Bos confirms its leading position in the field of ports and waterways and offers good options for a long-term presence in Turkey. Witteveen+Bos joined forces with NIRAS, its Danish partner in the strategic European network and created a consortium for a strategic project in Turkey. [73]

- **CDM Smith**

CDM Smith is an engineering company mainly providing services in water, environment, energy, transportation and facilities sectors. The company is based in US. There are planning to open an office in Istanbul to enter the Turkish market. Their targeted areas in Turkish market are listed as water, wastewater, energy and infrastructure projects. [74]

- **Dahlem Engineering Company**

Dahlem Beratende Ingenieure GmbH is a medium size engineering and consultancy company, which has its headquarters in Germany. The activities of the company cover, water supply, wastewater discharge and wastewater treatment, surface waters planning, development of infrastructure, solid waste engineering and recycling management, and civil engineering. It has been active in Turkey during the last five years. They have project offices in Mersin and Tokat. [75]

- **IGIP Consulting and Engineering Company**

IGIP is a German based engineering consultancy company that is mainly active in water, wastewater, solid waste, development assistance and renewable energy projects. [76] IGIP has a local subsidiary in Turkey, which is called the Mavi Consultants that has been established in 2007. The main services provided by Mavi Consultants are environmental project management, renewable energy financing and sustainable development projects. Based in Istanbul, Mavi Consultants provide services for private companies, development agencies and financial institutions to adopt sustainable development strategies and facilitate responsible business practices in Turkey, South East Europe and Africa with a network of local and international partners.[77]

- **AF Consult**

The AF Group is UK based technical consulting services company that is mainly active in industrial processes, infrastructure projects and the development of products and IT systems. The group has approximately 4,500 employees and its headquarters is located in Russia however its clients are found all over the world. The group's business areas correspond to four divisions that are listed as energy, infrastructure, industry and technology. [78]

- **Pell Frischmann**

Pell Frischman is one of the UK's leading firms of consulting engineers, with major operations throughout Europe, the Middle East and Asia. Since its establishment over 85 years ago, they have grown into a worldwide organisation, bringing innovative solutions to international clients. In the UK there are 9 regional offices offering multi-disciplinary engineering consultancy services. [79]

- **Yüksel Proje**

Yüksel Engineering Company is the biggest local engineering company in Turkey with over 650 employees. Yüksel Proje gives services about Highways, Motorways, Biridges, Rail Systems, Air Ways, Ports, Conduit Lines, Rain Water and Drain Networks, Potable Water Networks, Treatment Plants, Buildings, Industrial Constructions. Their services include construction management, project management and controller services. The company has significantly high brand recognition in Turkish market. It is also providing technical services outside Turkey such as in the Middle East, Caucacus, Eastern Europe and North Africa. [80]

- **Temelsu**

Temelsu is a Turkish consulting engineering company providing multi-disciplinary engineering services, locally and internationally, since its foundation in 1969. Its fields of specialization cover water, waste, infrastructure and environmental services. The company provides reconnaissance, master plan and feasibility studies, final design, detailed design, consultancy and construction supervision services. Temelsu is a strong local engineering firm, based in Ankara with over 200 employees. The main activities of the company are defined as wet infrastructure and waste. The company provides technical engineering services outside of Turkey as well. [81]

- **Su Yapi**

Su Yapi is independent engineering and consulting firm and it has been providing engineering and consulting services for more than 500 projects. The company is mainly active in municipal infrastructure, energy water resources, transportation and buildings sector. Su Yapi is a well-established local engineering firm, which has a strong presence in wet infrastructure. The company has its headquarters in Ankara, operating with over 300 employees. [82]

- **Tempo**

Tempo provides engineering and consultation services in the fields of water supplies, wastewater management, solid waste management, transportation, natural gas, irrigation, drainage, flood control, environmental management, leak detection, and construction management. The company pursued an exponential growth during the last decade. The company is owned by a Turkish Parliament member and it is well known have good connections with the local governmental bodies including municipalities. The company has its headquarters in Ankara. [83]

- **Dolsar**

Dolsar is a multi-disciplinary engineering company, which performs engineering, architectural, consultancy and supervision services for large-scale projects in a wide range of fields. The services of the company are in the fields of energy, water, land resources and regional development, environment, transportation and buildings. The company based in Ankara and its main area of expertise is hydropower plants. [84]

6. INTERNAL ANALYSIS

Internal analysis carried out for MWH Global that focuses on strengths that refer to core competencies, which give the company an advantage in meeting the needs of its target markets and weaknesses that refer to any limitations a company faces in developing or implementing a business strategy. The main objective of the internal analysis to underline the factors pertaining to the internal environment of the company which are defined as strengths, the key capabilities of MWH within the market, and weaknesses due to a lack of appropriate resources and from the marketplace perspective of the as a whole.

6.1. MWH Global

MWH is a global engineering, construction and strategic consulting company, located in 38 countries worldwide, operating with more than 7.000 employees and headquartered in Broomfield, Colorado, USA. It is the product of three key lineages of engineering firms with histories established in the 1850s.



Figure 19. The logo of MWH

MWH is providing engineering consultancy across water, energy, waste and infrastructure sectors and it is mainly active in the wet infrastructure sector. MWH's services encompasses; water supply, treatment and storage, water resources management and coastal restoration; design and construction of hydropower and renewable energy facilities, full environmental and sustainability services; design and construction of waterways, ports and harbour facilities, transportation solutions and planning.

MWH operates through four regional business units: Europe-Africa, Middle East, Americas, and Asia-Pacific. In Europe-Africa, it operates in Italy, United Kingdom, Belgium, Greece, the Netherlands, Turkey, Cyprus, Ukraine, Ethiopia, South Africa, Tanzania, Kenya, Botswana, Uganda, Mauritius, Libya, and Mozambique. In the figure below the consultancy markets of MWH in selected operations within Europe-Africa is demonstrated according to growth and market share. As it is demonstrated the UK Water services have the highest current market share. While the strategic services in Turkey has the potential tendency to growth however the market share is significantly low. [85]

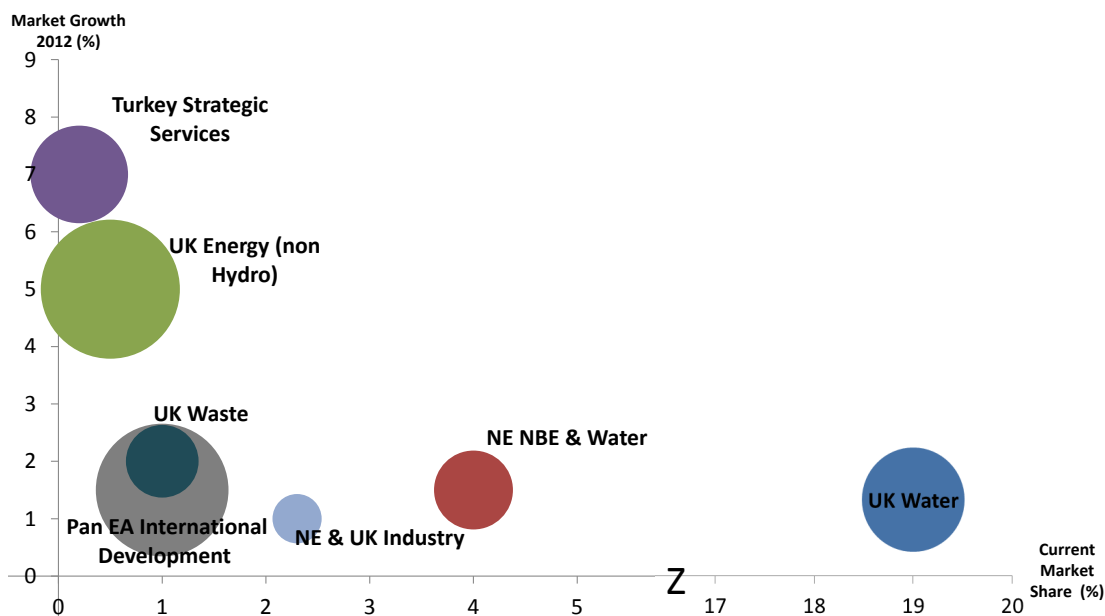


Figure 20. MWH's consultancy markets in Europe-Africa – Growth, Share and Size 2011-2012

6.2. Organizational Changes in MWH Global

MWH Global has been re-structured internally by the end of 2011. The main objective of the re-organizational changes is to increase internal collaboration and cross selling. Thus, it is aimed to break down internal barriers by understanding better the effective team works in different locations. The main challenge for MWH Global in 2012 is to strategically position the company in order to sustain the growth. The main divisions within MWH Global are Energy & Industry, Government & Infrastructure, Business Solutions Group, US Federal, Innovyze and MWH Constructors. Energy & Industry includes hydropower, mining and industrial businesses, providing a wide range of engineering and consulting services. Government & Infrastructure combines the engineering and technical services and program work delivered to local government clients and infrastructure clients in the Americas, Asia, Australia and New Zealand and in the U.K. and Continental Europe and in the Middle East region. Business Solutions Group coordinates closely with the Government & Infrastructure and Energy & Infrastructure businesses. It includes program managers, program controls, systems and tools experts and marketing groups who focus on winning work for program management. U.S. Federal combines engineering and technical services, program management and consulting services delivered to U.S. Federal clients for work commissioned by the U.S. Federal Government or its designees. Innovyze software development will continue to create the tools for water and wastewater modeling and management for clients. MWH Constructors provide construction and construction management services to the clients in the United States and in the U.K. [86]

6.3. MWH Turkey

MWH started its operations in 1999 in Ankara to provide services in the field of water resources, hydroelectric engineering, environmental and infrastructure projects in Turkey. The office is relocated to Istanbul in 2010 and it is actively working with a team based on fifteen employees, which are composed of both by MWH employees and external consultants from partner companies. As a result of the office in Turkey, MWH has a unique understanding of the Turkish legislative and commercial environment, which allows providing solutions with a multinational approach fully matching with the local needs. The primary focus of MWH Turkey is wet infrastructure. The main target is of MWH in Turkey is to be the leader in water, waste and energy sectors while having a sustainable and a profitable business with managed risks. Due to the unique market features, the long term goal for MWH Turkey is to develop a high quality organization with skilled local personnel who can represent and demonstrate MWH engineering quality and occasionally, whenever necessary, specific technical support from the MWH's Operations. The strategic objectives of MWH Turkey 2012 are aligned with the overall MWH Europe Africa strategy and vision. The figure below demonstrates the Europe-Africa long-term vision of MWH starting from 2012.

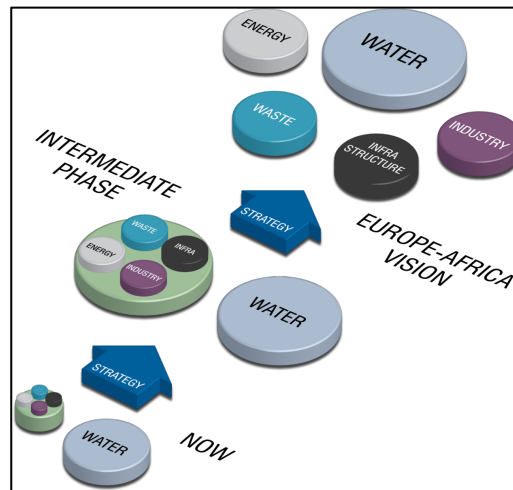


Figure 21. Europe-Africa vision of MWH

MWH Turkey is a developing operation that needs to be supported in order to sustain the growth and to create a stable operation. There are tangible and intangible internal factors need to be supported internally within the operations. From tangible perspective, the financial compliance support to internal and external audits is necessary. Legal & Risk Management requires risk review and the compliance with MWH policies and the terms and conditions. From the human resources point of view key personal recruitment with multi tasking capabilities is necessary. Technological needs such as integrated IT networking systems. The increase in the brand recognition is crucial for

an optimum growth in the Turkish market. Therefore communications to promote MWH brand, capabilities and global presence will be a vital element. The instruments necessary to fulfill the needs are the statement of qualifications prepared in Turkish, an updated Turkish web site.

6.3.1. Elaborations about Key Projects

The on-going service area of MWH in Turkey is the energy sector that includes Turkey Sustainable Energy Financing Facility (TURSEFF) and Mid-Size Sustainable Energy Financing Facility (MidSEFF) projects. [87]

Turkey Sustainable Energy Financing Facility (“TURSEFF”)

TURSEFF is a framework operation of 200 million USD under which EBRD provides to four local banks credit lines dedicated for on-lending to industrial companies, commercial enterprises and private householders that are willing to invest in energy efficiency or renewable energy projects. The aim of the facility is to instigate a self-sustaining market for investment in small and medium sized sustainable energy projects in Turkey. MWH is the leader of a consortium that consists of four members: MWH and D’Appolonia, based in Italy and having local branches in Turkey, and GFA ENVEST and Frankfurt School of Finance & Management (FS), based in Germany. In the two figures below the logo of the project and the implementation team is demonstrated.



Figure 22. The logo of Turseff project

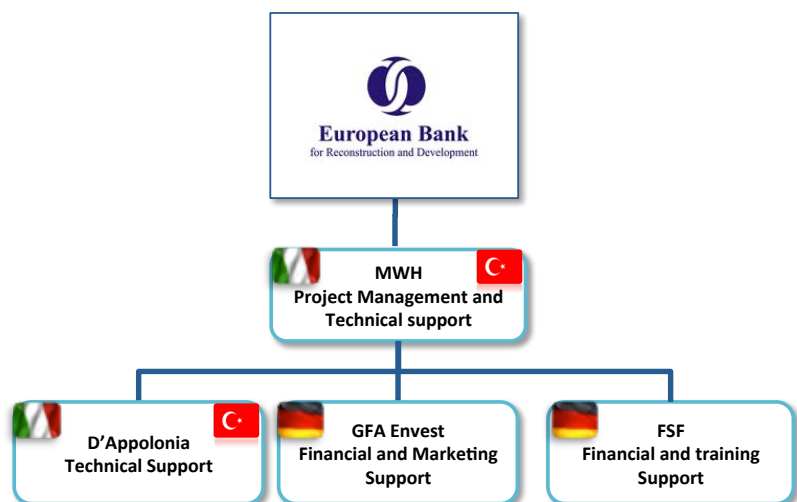


Figure 23. Implementation Team of TURSEFF project

The project consortium assists with the design, launch and implementation of the project and it is responsible to provide a comprehensive technical assistance package. A team of international and

local expert provide support to prospective borrowers through energy efficiency assessments, project scoping and development of the most viable solution. At the same time the consortium provides guidance and training to the local banks in order to ensure they become familiar with appraising financing sustainable energy investment project. The verification consultant ensures that the objectives of the TURSEFF are met and the sub-projects have been completed in accordance with the relevant investment plans and are on track to achieve the planned energy savings. In the figure below the structure of the framework is demonstrated.

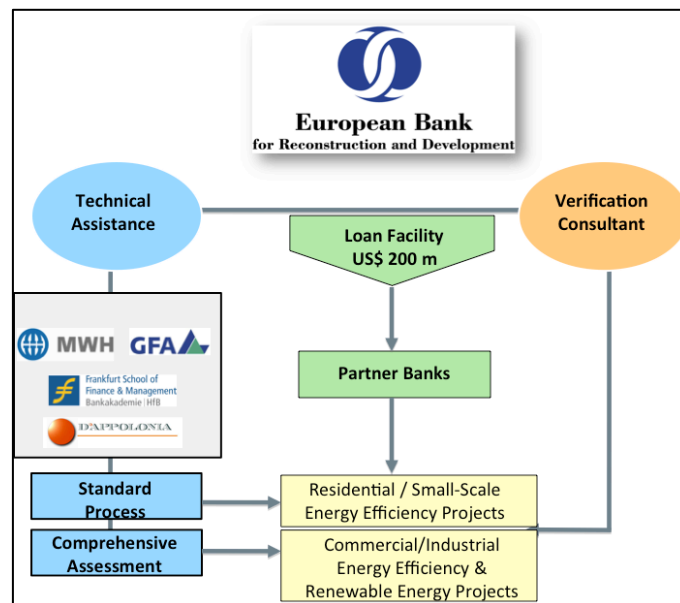


Figure 24. TURSEFF project Structure

The partner banks are four well-established local banks, namely Akbank, Türkiye İş Bank, Denizbank, Garanti Bank, Vakıfbank, are actively operating in Turkish market. Sub-borrowers must be financially viable and meet the partner banks' (PB) credit criteria and be approved in accordance with the PB's credit appraisal procedures. The maximum individual Sub-loan amount shall be USD 5 million for Energy Efficiency, Renewable Energy and Commercial Buildings Sector Sub-projects, USD 300,000 for Small Scale Sub-projects, USD 75,000 for Residential Sector Sub-projects and, USD 1 million for investment loans to Energy Efficiency Suppliers. [88]

Turkey Mid-size Sustainable Energy Financing Facility (“MIDSEFF”)

The European Bank for Reconstruction and Development (EBRD) has launched in 2011 Mid Size Sustainable Energy Financing Facility (MidSEFF) that aims to scale up renewable energy and energy efficiency investments in Turkey. The main objective of the financing facility is to support Turkey for reducing its dependence on fossil fuels by financing private sector investments in mid-size sustainable energy projects.



Figure 25. The logo of MidSEFF project

The total amount of the loan to be provided under MidSEFF project is EUR 900 million. EBRD is financing EUR 600 million while EIB is financing EUR 300 million on lending to private sector borrowers, through five Turkish banks, to undertake mid-size renewable energy, waste-to-energy and industrial energy efficiency investments. The local banks are listed as Akbank, Denizbank, Garanti, Vakifbank, Yapi Kredi Bank. MidSEFF structure is based on workflows among different stakeholders. As it is seen on the Figure below, project organization structure includes implementation team, participating local bank, end users and EBRD. Implementation team is commissioned by EBRD to provide technical and environmental technical advisory services, project appraisal and environmental impact assessments.

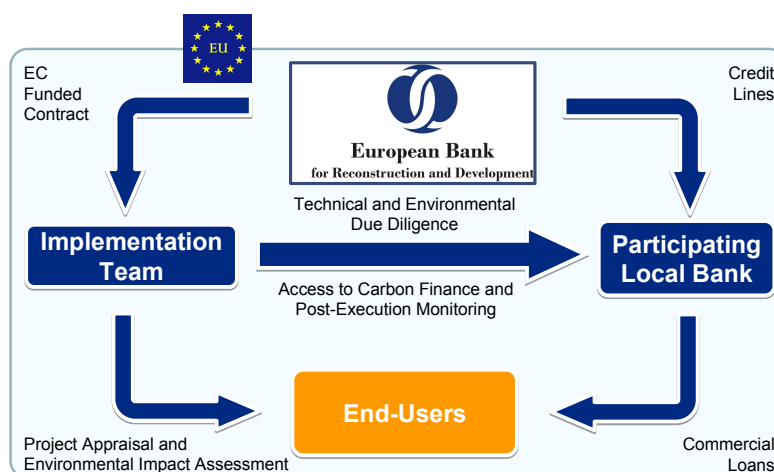


Figure 26. MIDSEFF Project Overall Structure

The organizational structure of the project includes Management Team, Long- Term Experts. A team leader who has also the role of Chief engineer leads the management team. The chief

environmental expert is responsible for the environmental compliance evaluation and the chief Financial Expert is in charge of the project controlling and reporting. On the figure below, the organizational chart of MIDSEFF project has been demonstrated.

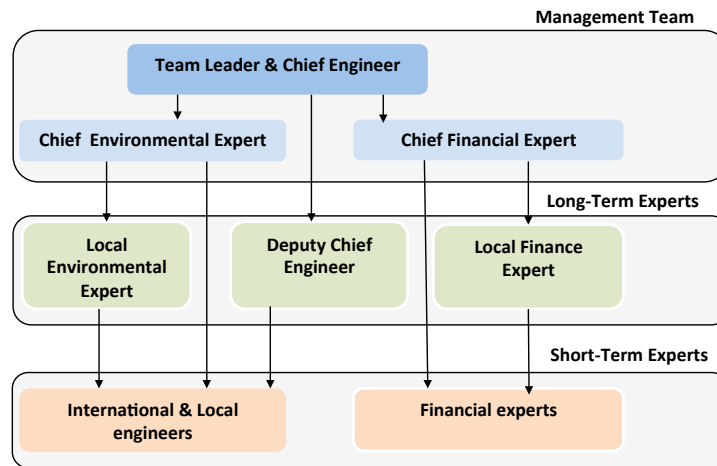


Figure 27. Organizational Chart of MidSEFF

Renewable energy projects eligible for MidSEFF are cogeneration, trigeneration, run-of river hydropower (<10MW), Wind Turbines (<10 MWH), Biomass combustion systems, solar hot water and drying, geothermal heatpumps, biogas engines and photovoltaics. Sub-loans financed from the Facility shall be in the range of EUR 10 to 40 million and the total investment cost of the Sub-project shall not exceed EUR 50 million. Sub-loans amount outside this range and/or sub-projects requiring higher investment volumes will be considered on a case by case basis and financed only following approval from the EBRD. The technical assistance of MIDSEFF project includes technical, financial and environmental, procurement and carbon finance review of the projects from the borrowers. The scope of work of this assignment includes proposed sub-project and sub-borrower presentation; project technical performance and of forecasted energy outputs, technical soundness of selected equipment and design, assessment of the status of the grid connection arrangements, and of the grid capacity, contractual review; recommendations on key issues where the proposed project can be improved; GHG emissions reductions estimation; analysis on the process of selection of suppliers and equipment; identification of main risks and deficiencies for future operation; activity based schedule; estimated investment costs review; capital investment appraisal, including: financing plan, project cash flow analysis and statements; scenario analysis – sub-project sensitivities. [89]

7. STRATEGIC OPTIONS

This chapter aims to link the essential aspects obtained from external and internal analysis. Three strategic options with different perspective and focus are generated while current priority and the level of the risk for the strategic options are evaluated.

MWH is seeking to improve its market share during the transition phase in Turkey. It aims to create a self-sustainable presence by growing a profitable business centered on water, energy, waste and transportation infrastructures. This goal can be obtained by market expansion with differentiated solutions in the core and non-core businesses. The estimation for the market growth is \$0.5b at 7% per year. In order to accomplish this challenging mission it is crucial to have an overall understanding considering corporate responsibility and strategic objectives.

Internal and external analysis was combined with a qualitative assessment of the critical aspects to obtain an extensive SWOT analysis, which is demonstrated on Table 11. It provides strategic intelligence on strengths and weaknesses, country opportunities for growth, challenges and threats from current competition and future prospects.

SWOT ANALYSIS	
STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> • Global company with worldwide resources • Leader in wet infrastructure sector • High quality engineering consultancy services • Experience, repeatable solutions and templates • Project development and innovation • Multinational approach fully matching with the local needs • Understanding of the Turkish legislative and commercial environment • High customer responsiveness 	<ul style="list-style-type: none"> • Budget constraints • Start up phase of the business • Financial management and compliance with internal and external audits • Legal and risk perspective, adaptation with internal Go/No-go decisions • Limited human resources and lack of key experts • Lack of well integrated internet technologies network • Low brand recognition in Turkish market • Lack of updated website, commercial items, brochures, leaflets, statement of qualifications in Turkish • Lack of existing customer base in Turkish market • Challenges for strategically position the company in order to sustain the growth after the re-organizational changes
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> • Entering to an emerging market • Integration with European markets • Young and well-educated work force • Growing energy, water and waste sector • Tremendous foreign direct investment • Stable and sophisticated banking system • Investment incentives from government in renewables market particular hydropower and wind projects, and energy efficiency support • Drinking water, wastewater treatment and solid waste services to government • Municipal waste storage facilities and landfills • Privatization of electricity distribution grids • Environmental Impact Assessment Studies • Due Diligence Studies • Adaptation to EU environmental legislation is on progress • Strong private sector multinational and local potential clients 	<ul style="list-style-type: none"> • Global financial crisis • High competition in the market • Unstable market conditions • Local consultants have low price in the market. • Substitute firms (technical universities, engineering organizations) • Possibility that environmental issues will not be given the political priority that is needed to effect significant changes over the medium term • Delay in the liberalization process and the private sector investments • Local financial crisis, inflation, currency parity in Turkey • Client's bankrupt, problems with the client • Limited capacity of small and medium size municipalities to manage internationally co-financed projects, and to sustain their environmental services. • Comparatively low level of integration of environmental requirements into sectorial policies e.g. agriculture, energy, tourism. • Financing institutions may not adequately service environmental issues due to unexpected economic crisis

Table 11. SWOT analysis

The strategy presented herein will be based on three strategic options. The focused solutions are in line with the company objectives and the market conditions. “Strategic options evaluation matrix”, including current priority and risks was developed to create a general picture for the segmented clients through three different tiers. The findings of the matrix guided in developing priorities towards the risk evaluation.

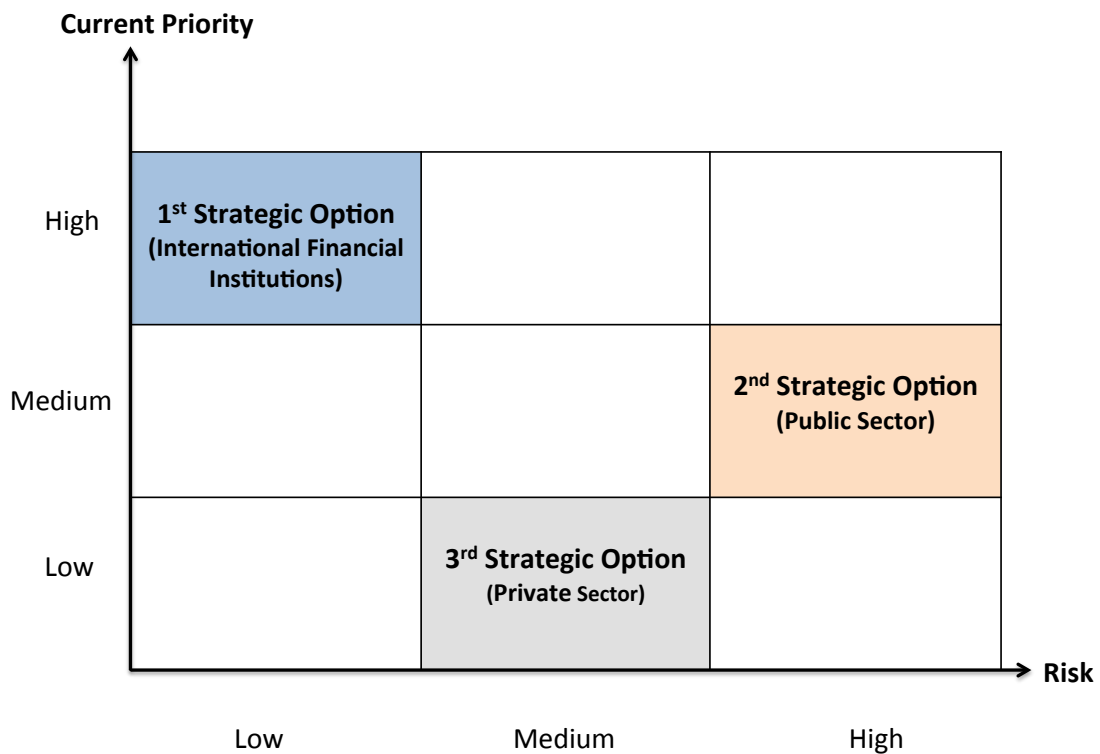


Figure 28. Strategic options evaluation matrix

1st Strategic Option: Strategic focus foresees to be concentrated on the projects from international financial institutions that are significantly investing in Turkey by contributing in energy, water, waste and infrastructure sectors. The selection was made according to the potential client analysis.

Financial capacity for environment projects in Turkey is increased due to alternative financing of environmental protection activities through participation in various global funds and projects. The main concept is positioning for EU Financed projects mainly on wet infrastructure sector. The targeted clients are defined as European Commission (EC), European Investment Bank (EIB), European Bank for Reconstruction and Development (EBRD), World Bank, KfW BankenGruppe, IPA Center and French Development Agency (AFD).

This pillar aims to obtain a number of projects that would help to sustain MWH business in Turkey. Strategic Option 1 is evaluated within the “low risk” group on the strategic options evaluation matrix since the segmented clients are providing advantage with their secured budget for the

projects. Table 11 demonstrates the Group 1- segmented clients. This group holds high level of current priority according to the objectives of MWH. Table 12 demonstrates the segmented clients within the Strategic Option 1 with their key sectors.

Strategic Option 1	
Client Name	Key Sectors
European Commission (EC)	Water
European Investment Bank (EIB)	Energy
European Bank for Reconstruction and Development (EBRD)	Energy
World Bank	Water/ Infrastructure
KfW BankenGruppe	Water/ Infrastructure
IPA Center	Water/Waste
French Development Agency (AFD)	Energy

Table 12. Group 1-segmented clients

In this perspective, short and midterm marketing plans will emerge around water, infrastructure and waste projects.

2nd Strategic Option: Strategic focus emphasis on focusing state and governmental bodies mainly in water, wastewater and infrastructure sectors. Strategic Option 2 is evaluated within the “high risk” group on the strategic options evaluation matrix considering strict project terms and conditions, the high level of engagement required for the projects, challenging deadlines and inflexibility. This group has the medium level of current priority according to the objectives of MWH. The potential clients are evaluated according to the relevant authorities in Turkey that are listed as Ministry of Forestry and Water Works, Istanbul Water and Sewerage Authority (ISKI), Ankara Water and Sewerage Authority (ASKI), General Directorate of State Hydraulic Works (DSI) and Ministry of Transportation. The announcements by the government bodies need to be monitored on the regular basis.

The Republic of Turkey has a number of goals for 2023, when Turkey will reach the 100th anniversary of the establishment of the Republic. The strategic plan comprises several targeted projects covering the environmental aspects. In this perspective the incentives from the government and their priorities according to the sector takes an important place. Table 13 demonstrates the Group 2 segmented clients with their key sectors.

Strategic Option 2	
Client Name	Key Sectors
Ministry of Forestry and Water Works	Water/ Infrastructure
Istanbul Water and Sewerage Authority (ISKI)	Water
Ankara Water and Sewerage Authority (ASKI)	Water
General Directorate of State Hydraulic Works (DSI)	Water
Ministry of Transportation	Infrastructure

Table 13. Group 2-segmented clients

3rd Strategic option: Strategic focus aims to pursue opportunities from local and multinational private companies. MWH key clients with global corporate agreements in wet infrastructure sector are mainly targeted with the aim of using the advantage of existing relationships. The strategic option 3 includes multinational private clients, local private clients (holding companies), organized industrial districts and free zones. Key sectors to be focused are water, energy and infrastructure.

Strategic Option 3	
Client Name	Key Sector
Multinational Private Clients	Water/Energy/Infrastructure
Local Private Clients (Holding Companies)	Water/Energy/Infrastructure
Organized Industrial Districts	Water/Energy/ Infrastructure
Free Zones	Water/Energy/ Infrastructure

Table 14. Group 3-segmented clients

Strategic option 3 is evaluated within the “medium risk” group on the strategic options evaluation matrix considering the diversified project conditions, different ranges and more flexible project conditions. This group is defined under the “low” level of current priority according to the objectives of MWH. The existing competencies to handle local clients are limited and there is insufficient know-how on the market place. It is expected to obtain potential quick wins from the private sector multinational and local clients.

Partnership Agreement with Local Companies

Selection and positioning of strategic partners from local engineering consultancy companies is an essential step to leverage from their brand recognition and existing scale in the market. Key tactical steps in this segment are identifying strategic partners and beginning joint marketing. The objective of analyzing the potential local partners is to evaluate the possibility for collaborations for the possible projects. After a detailed market study of engineering consultancy companies in Turkey, operating, potential local partner companies for MWH are defined. The companies are listed as; Yüksel Proje, Pales Engineering and Consultancy Company, Maximum Energy, Dolsar, Temelsu, Cema, Tempo Engineers and Consultants. Moreover Technical Universities and Legal entities can

be potentially local partners considering their strong presence and market knowledge. A brief description about the potential partner companies is provided below.

Yüksel Proje is an engineering company mainly focused on water, wastewater, civil, industrial and transportation infrastructure sectors. There are existing relationships between MWH related to several projects in water and wastewater sectors.

Pales Engineering and Consultancy Company deals with renewable energy and environmental services including technology research and development.

Maximum Energy is committed in the engineering, technical services and consultancy on energy efficiency.

Dolsar Company is mainly active on the sectors such as water, wastewater, civil, industrial and transportation infrastructures, energy production and transmission systems. Some opportunities are under discussion for EU funded projects in Turkey and Africa.

Temelsu is providing its engineering consultancy services within water, wastewater, civil, industrial and transportation infrastructures, energy production and transmission systems sectors.

Cema Company is active in water/wastewater administrations, including master planning, feasibility studies, design and supervision of water/wastewater infrastructures. Partnership agreements have been set up for pursuing a number of EU funded projects in 2011 in water and wastewater sectors.

Tempo Engineers and Consultants are mainly active in water supplies, wastewater management, solid waste management, transportation, natural gas, irrigation, drainage, flood control, environmental management, leak detection, and construction management.

Technical Universities, Istanbul Technical University, and Middle East Technical University are well established technical universities that may potentially collaborate. The incentives within technical universities are encouraging industries to obtain support from academicians for specific projects so that special agreements shall be arranged for the prospective tenders.

8. CONCLUSIONS

This section points out the overall roadmap including the critical factors, risks and the priorities on the time horizon. The goal is to create an implementation framework that will be helpful for guiding and directing the managerial decisions. The recommendations were prioritized to obtain solutions for advancement and possible improvements. A further outlook is given for the future analyses to deepen the investigation in some necessary areas.

8.1. Road Map for Strategic Options

In this part the roadmap is described including the most convenient strategic option for the company in this stage of the operation considering the whole analysis. The solutions are created in line with the objectives of the defined strategic options. Each strategic option has critical factors to be considered in order to pursue a successful business. The critical factors are evaluated to achieve the expected benefits with respect to each strategic option; action steps including suggested solutions are also defined. Moreover the possible solutions to overcome the internal and external barriers are given. Finally the strategic options are consolidated in a sequential manner with an aim of obtaining the best results in the shortest possible time. The consequences of the three different strategic options are provided below. The implementation framework for each strategic option is identified after a careful evaluation.

➤ 1st Strategic Option (International Financial Institutions)

The first strategic option has the highest current priority and lowest risk level on the “strategic options evaluation matrix”. There are several critical factors to maintain for the expected results of this strategic option. The action steps and the suggested solutions need to be realized to ensure the pointed critical factors. A logical framework is given to outline the fundamental context of this option.

- International financing institutions are seeking to obtain high quality technical advisory services from engineering consultancy companies. An advanced project delivery complying all the requirements is a crucial aspect. There should be a specific focus on the process quality and cost drivers. The existing know-how in the similar projects creates a competitive advantage.
- One of the most important expectations of the international financing institutions is the technical capability. Internal development shall be a dynamic process to ensure the technical competences of the team is satisfactory. The project team shall be composed of key experts at all

the relevant fields. The recruitment of new employees requires a specific attention on this stage. The advantage of well-educated and dynamic workforce of Turkey creates a platform to extend the scale of the business. Once the core team is established, the knowledge shall be improved and transmitted through internal trainings and workshops. Moreover the international expertise shall be used by knowledge sharing among different operations and regions. Market penetration in energy sector is a prioritized recommendation.

- Managing the complex projects in an efficient manner requires a precise time management scheme. The coordination of the project has a direct impact on the project delivery. Thus it is linked to respect the timeline of the project while providing the expected outcome.

- Customer satisfaction is a critical factor to further develop the existing relationships. Fulfillment of the requirements from the clients and building future oriented relationships is an essential approach.

- As it is described on the internal analysis chapter, there are two successful “Energy Financing Framework” projects funded by EBRD within the pipeline of MWH Turkey operations. The opportunity to grow by continuing with International funded projects is a visible path in the short term. The specific priority shall be given for the possible extension of the on-going projects. There should be a pro-active approach for the possible project extensions.

- Partnership Agreements; selection of strategic partners from local engineering consultancy companies is an essential step to be accomplished in order to leverage from their brand recognition and existing scale in the market.

- Joint development (Consortium and Strategic Alliance); contractual arrangements, collaboration with multinational and local companies as well as the agreements with professionals who are experts on desired areas create a significant advantage.

* **Risk factors:** *Financing institutions may not adequately focus on environmental issues due to unexpected economic crisis that creates reduction on the demand. Moreover, the qualifications and eligibility of the partner companies is an important issue to be considered.*

A systematic way must be created to track the progress reports and strategic statements of international financing institutions. The understanding of their progress level would be possible by monitoring their disbursements by the sectorial division. This would help to gain a better understanding on the market conditions.

The main critical factors and the action steps to ensure that the critical factors are reached in an effective way are summarized on the Table 15.

<i>Critical Factors</i>	<i>Action Steps – Suggested Solutions</i>
<i>Quality of the Product</i>	<ul style="list-style-type: none"> • <i>External: Focus on the service and product quality (Maintain an advanced project delivery)</i> • <i>Internal: Focus on the process quality, cost drivers (Project management, progress control)</i> • <i>Use the existing know-how in the similar projects</i>
<i>Technical competences</i>	<ul style="list-style-type: none"> • <i>Internal Development (Recruitment of new employees with key technical capabilities, internal trainings and workshops)</i> • <i>Take advantage of international expertise and global business by inter company agreements, knowledge sharing among different operations and regions</i>
<i>Managing the complex projects and coordination</i>	<ul style="list-style-type: none"> • <i>Efficient time management scheme (respecting the milestones & deadlines)</i>
<i>Customer satisfaction</i>	<ul style="list-style-type: none"> • <i>Fulfill the requirements from the clients, build future oriented relationships</i>
<i>Extension the contracts of existing projects</i>	<ul style="list-style-type: none"> • <i>Precise project delivery, pro-active approach for the possible project extensions</i>
<i>Partnership Agreements</i>	<ul style="list-style-type: none"> • <i>Select strategic partners from local engineering consultancy companies to leverage from their brand recognition and existing scale in the market.</i>
<i>Joint development (Consortium and strategic alliance)</i>	<ul style="list-style-type: none"> • <i>Contractual arrangements (Collaboration with multinational and local companies)</i> • <i>Agreements with professionals who are experts on desired areas</i>

Table 15. Critical Factors and Action Steps (1st Strategic Option)

As a result, the 1st Strategic Option is considered to be the best alternative on the current stage of the business. This option would help to explore the business opportunities on the local market. After the successful implementation of this option the company is expected to maintain its positioning as a stand-alone operation.

➤ 2nd Strategic Option (Public Sector)

Engineering consultancy companies are likely to be active in Turkey in the near future in the public sector. The developing areas are mainly municipal water & wastewater treatment, municipal solid waste treatment and waste-to-energy projects. Significant direct investment opportunities are taking place in environmental technologies, advanced conventional energy generation and renewable energy in Turkey. International consultancy companies are expected to find their major business opportunities in these areas.

- Local environmental regulations knowledge; medium and long-term strategic plans prepared by government are important references for understanding their priorities.

- EU Environmental regulations experience; Due to the environmental concerns and the adaptation to EU environmental legislation progress, the government gives a particular attention to the environmental issues. There is an increased demand for feasibility studies and technical assessments for implementing the projects in a successful manner. It is necessary to capture the demand for the advisory services on this perspective

- Optimum project adaptation time is an important point considering the time constraints of the opportunities, which require quick responses.

- Adequate budgeting for the projects is a crucial factor to respond the competitiveness of the market. Detailed financial planning is necessary for the budgeting phase.

- Strong bidding/project/marketing team; for governmental projects, there is a complex bidding phase considering the required official documents with specific format. It is necessary to build core-bidding team to create a structure for the best practices. This would help to perform in an efficient way to response the project requirements within the time constraints.

- Involving multidisciplinary teams by networking between the offices globally and developing a team with diversified key capabilities

- Risk management shall be implied by applying internal risk management regulations and leveraging from the existing experiences (internal tools and instruments are actively involved in current progress)

- Increased brand recognition: A focused branding activity is a fundamental issue since the governmental authorities tend to collaborate with well-known companies. Hence, a structured marketing approach is required. The brand shall be positioned according to the strategic targets of the company.

- **Risk factors:** *There is a high competition in the market due to the local consultancy companies who offer a low price in the market. Moreover the substitute organizations such as technical universities take an important place for the projects de to their reputation and technical*

competencies. Besides the capacity of small and medium size municipalities to manage internationally co-financed projects is limited. Strict project terms and conditions, the high level of engagement required for the projects, challenging deadlines and inflexibility are considered within the risk factors.

The critical factors and the required action steps are summarized on Table 16.

Critical Factors	Action Steps – Suggested Solution
<i>Local environmental regulations knowledge</i>	<ul style="list-style-type: none"> • <i>Monitoring governmental medium and long-term strategic plans</i>
<i>EU Environmental regulations experience</i>	<ul style="list-style-type: none"> • <i>Capture the demand for the advisory services on this perspective</i>
<i>Optimum project adaptation time</i>	<ul style="list-style-type: none"> • <i>Quick response to the opportunities</i>
<i>Adequate budgeting for the projects</i>	<ul style="list-style-type: none"> • <i>Detailed financial planning</i>
<i>Strong bidding/project/marketing team</i>	<ul style="list-style-type: none"> • <i>Increasing the scale by recruiting new employees</i> • <i>Necessity to create core teams</i>
<i>Involving multidisciplinary teams</i>	<ul style="list-style-type: none"> • <i>Networking between offices globally, developing a team with diversified key capabilities</i>
<i>Risk management</i>	<ul style="list-style-type: none"> • <i>Apply internal risk management regulations and leverage from the existing experience (internal tools and instruments are actively involved in current progress)</i>
<i>Increased brand recognition</i>	<ul style="list-style-type: none"> • <i>Structured marketing approach</i> • <i>Positioning the brand according to the strategic targets</i>

Table 16. Critical Factors and Action Steps (2nd Strategic Option)

➤ 3rd Strategic Option (Private Sector)

The potential clients in private sector are mature and dynamic in Turkey. Environmental consultancy companies tend to support the private companies with “funded framework” opportunities for their investments. In energy sector, the private companies are willing to obtain feasibility studies and master design for their projects.

- Market knowledge can be increased by focusing on the multinational clients that are already clients of MWH in other countries. Detailed understanding of the market is crucial in order to overcome the challenges. The competition in the market is high because of already established multinational and local engineering consultancy companies. International companies tend to establish partnership agreements with local engineering companies to create price advantage considering the fee of the local experts is relatively lower.

- Access to new market areas: External development/acquisition is a quick way of providing access to new market areas with the economies of scale advantages.

Business development: Networking activities through business associations and chamber of commerce’s. In Turkey there are a number of business bodies working to improve economic ties. The existing memberships to Chamber of Commerce’s and business associations are suitable platforms to develop the business. Several business associations and chamber of commerce’s are actively operating to support international companies to extend their operations in Turkish Market. These associations are well known with their networking and matchmaking activities. Networking towards the business is seen as a key point to increase the intangible assets such as brand recognition and visibility in the market.

- Innovative solutions; knowledge sharing, monitoring the multinational research and development activities & new patents.

- Expanding the business beyond the borders: MWH Turkey can be located as the headquarters of Western and Eastern Balkan countries in the long term as their business culture is very similar to Turkey.

* **Risk factors:** *The high competition in the market creates an entry barrier in the early stage of the business. There is a limited competency to handle local client culture and to govern the projects.*

The critical factors and the action steps are described in a synthetic way the Table 17.

Critical Factors	Action Steps – Suggested Solution
<i>Market knowledge</i>	<ul style="list-style-type: none"> • <i>Focusing on existing multinational clients of MWH.</i> • <i>Using the advantage of global company agreements</i>
<i>Access to new market areas</i>	<ul style="list-style-type: none"> • <i>External development /acquisition</i>
<i>Business development</i>	<ul style="list-style-type: none"> • <i>Networking activities through business associations and chamber of commerce's</i>
<i>Innovative solutions</i>	<ul style="list-style-type: none"> • <i>Knowledge sharing, monitoring the multinational research and development activities & new patents</i>
<i>Expanding the business beyond the borders</i>	<ul style="list-style-type: none"> • <i>Business opportunities with Western and Eastern Balkan countries</i>

Table 17. Critical Factors and Action Steps (3rd Strategic Option)

It is advisable to sequence various actions taken from the strategic options to get the best results in the shortest possible time. Figure 29 demonstrates the suggested sequence of three different actions.

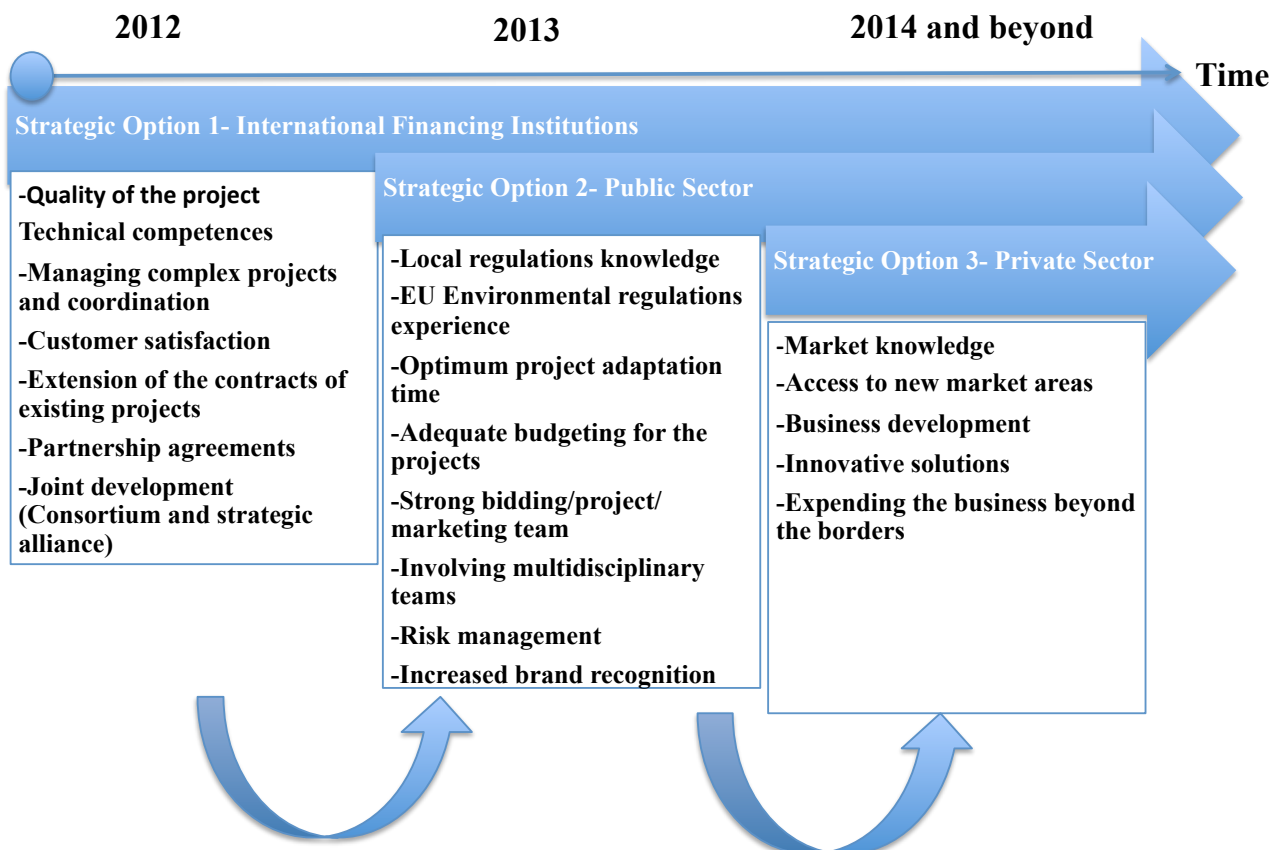


Figure 29. Suggested sequence of three different actions

Suggestions for Further Research

It is essential to expand the strategic business plan on the critical fields. A further detailed investigation about the potential private clients and the international financial institutions is suggested. Due diligence study for each likely partner company is necessary to proceed with the partnership option.

BIBLIOGRAPHY

- [1] Turkish Embassy, Washington, United States of America, (January 2012), Retrieved from <http://www.washington.emb.mfa.gov.tr/AboutTurkey.aspx?ID=1>,
- [2] Republic of Turkey, Prime Ministry Press and Information General Directorate, Country Presentation, (2011) Retrieved from, <http://www.byegm.gov.tr/docs/Turkiye2011/english/132-133.htm>
- [3] Republic of Turkey Prime Ministry Investment Support and Promotion Agency, Country Facts (2012), <http://www.invest.gov.tr/>
- [4] Customs and Foreign Trade in Turkey, Report, Deloitte, (November 2011), Retrieved from <http://www.treasury.gov.tr/>
- [5] Republic of Turkey, Turkish Trade and Business Portal, Investors Guide Special Report, Retrieved from, <http://www.turkishtradechicago.org/SpecialReports/investorsGuideReg.html>
- [6] Republic of Turkey, Revenue Administration, (January 2012), <http://www.gib.gov.tr/index.php?id=469>,
- [7] International Investors Associations of Turkey Report, (2008), Updated by Ernst & Young Turkey
- [8] <http://www.invest.gov.tr/en-US/investmentguide/Pages/10Reasons.aspx>
- [9] Republic of Turkey, Ministry of Economy, Retrieved from, <http://www.byegm.gov.tr/docs/Turkiye2011/english/014-15.htm>
- [10] <http://www.washington.emb.mfa.gov.tr/AboutTurkey.aspx?ID=1>
- [11] Republic of Turkey Prime Ministry Investment Support and Promotion Agency, Legal and Political Structure of Turkey, Retrieved from, <http://www.invest.gov.tr/en-US/turkey/factsandfigures/Pages/LegalAndPoliticalStructure.aspx>
- [12] Turkish Statistical Institute (2011), www.turkstat.gov.tr,

[13] Republic of Turkey Prime Ministry Investment Support and Promotion Agency, <http://www.invest.gov.tr>

[14] International Monetary Fund, World Economic and Financial Surveys, World Economic Outlook, (April 2012), Retrieved from, <http://www.imf.org/external/pubs/ft/weo/2012/01/pdf/text.pdf>

[15] Turkish Economy Current Account Situation, (September 2011), retrieved from, <http://www.hazine.org.tr/en/index.php/turkish-economy/current-account>

[16] Republic of Turkey, Central Bank, Economic Outlook and Monetary Policy Report, (December 2011)

[17] Undersecretary of Treasury, Turkish Economy report, (January 2012) (TC basbakanlik hazine mustesarligi)

[18] Turkish Statistical Institute, (2012), www.turkstat.gov.tr,

[19] Annex of the “Council of Ministers Decree No. 2010/966 dated 12 October 2010 on the Implementation, Coordination and Monitoring of 2011 Annual Program” Published in the Official Gazette No. 27732

[20] Republic of Turkey Prime Ministry Investment Support and Promotion Agency, 10 Reasons to Invest in Turkey, Retrieved from, <http://www.invest.gov.tr/en-US/investmentguide/Pages/10Reasons.aspx>

[21] Republic of Turkey, The Undersecretariat of Treasury, http://www.economy.gov.tr/upload/380BE181-C6CE-B8EF-37B940FAAD239BA2/FDI_Law.pdf

[22] Undersecretary of Treasury, Turkish Economy report, January 2012 (TC basbakanlik hazine mustesarligi) , Retrieved from, <http://www.economy.gov.tr/files/outlook.pdf>

[23] Foreign Trade Statistics, April 2012, <http://www.turkstat.gov.tr/PreHaberBultenleri.do?id=10827>

[24] Republic of Turkey, Ministry of Economy, Retrieved from <http://www.byegm.gov.tr/docs/Turkiye2011/english/022-23.htm>

[25] Turkish Statistical Institute, www.tuik.gov.tr

- [26] Unicef, Retrieved from, <http://www.unicef.org.tr/en/content/detail/53/children-in-the-population.html>
- [27] Turkey, National Education System Statistics, Formal Education (2010-2011), Retrieved from, http://sgb.meb.gov.tr/istatistik/meb_istatistikleri_orgun_egitim_2010_2011.pdf
- [28] Republic of Turkey Prime Ministry Investment Support and Promotion Agency, Education and Healthcare, Retrieved from, <http://www.invest.gov.tr/en-US/turkey/livinginturkey/Pages/EducationAndHealthcare.aspx>
- [29] Student Selection and Placement Center (OSYM), <http://www.osym.gov.tr/ana-sayfa/1-0/20120611.html>
- [30] Scientific and Technical Research Council of Turkey (TÜBİTAK), <http://www.tubitak.gov.tr/en/ot/10/>
- [31] Republic of Turkey, Ministry of Economy, Retrieved from, <http://www.byegm.gov.tr/docs/Turkiye2011/english/366-367.htm>
- [32] R. Tugrul Ogulata (2004): Energy Planning for Turkey, Energy Sources, 26:3, 323-335
- [33] Republic of Turkey, Ministry of Economy, Retrieved from <http://www.byegm.gov.tr/docs/Turkiye2011/english/208-209.htm>
- [34] Ministry of Energy and Natural Resources, Strategic Paper, Approved by the High Planning Council (2009). Issue No: 2009/11
- [35] Republic of Turkey, Energy Ministry, Strategic Document, (in Turkish) Retrieved from http://www.enerji.gov.tr/yayinlar_raporlar/Arz_Guvenligi_Strateji_Belgesi.pdf (page 2)
- [36] Mine Tükenmez, Erhan Demireli, (2011)Renewable energy policy in Turkey with the new legal regulations Dokuz Eylul University, Faculty of Economics and Administrative Sciences, Department of Business Administrative
- [37] I. Dincer, M.A. Rosen / Applied Energy 64 (1999) 427±440
- [38] Pre-Accession Economic Programme 2012-2014, Ankara December 2011

- [39] Çevre ve Orman Bakanlığı (Ministry of Environment and Forestry), Waste Action Plan (2008-2012)
- [40] Çevre ve Orman Bakanlığı (Ministry of Environment and Forestry), Turkish Environment Status Report (2007)
- [41] Turkey Prime Ministry, Investment Support and Promotion Agency of Turkey, Environmental Technologies & renewable Energy Industry Report, (December 2009), Retrieved From <http://www.invest.gov.tr/en-US/infocenter/publications/Documents/ENVIRONMENTAL.TECH.RENEWABLE.ENERGY.PDF>
- [42] Turkish Electricity Transmission Company (TEIAS) <http://www.teias.gov.tr/>
- [43] Republic of Turkey, Ministry of Energy and Natural Resources <http://www.enerji.gov.tr/index.php?dil=en>
- [44] Turkish Statistical Institute (2012), www.turkstat.gov.tr,
- [45] European Commission, <http://ec.europa.eu/>
- [46] European Union, Turkey 2010 progress report, Retrieved from, http://ec.europa.eu/enlargement/candidate-countries/turkey/financial-assistance/index_en.htm
- [47] European Investment Bank, <http://www.eib.org/>
- [48] European Bank for Reconstruction and Development, Retrieved from, <http://www.ebrd.com/pages/news/press/2012/120503a.shtml>
- [49] Coebank, available from, <http://www.coebank.org/index.asp?ChangeLangue=EN>
- [50] World Bank, <http://www.worldbank.org.tr/>
- [51] AFD and Turkey, Partners for Sustainable Development, Retrieved from, http://www.afd.fr/webdav/site/afd/shared/PORTAILS/PAYS/TURQUIE/Nos%20publications/AFD_Turquie_EN.pdf

[52] Islamic Development Bank Group, Main Report, Member Country Partnership Strategic of the IDB group for Turkey, June 2010, Retrieved From,

http://www.isdb.org/irj/go/km/docs/documents/IDBDevelopments/Internet/English/IDB/CM/Publications/Partnership_Strategies/Turkey.pdf

[53] Ministry of Energy and Natural Resources, <http://www.enerji.gov.tr/index.php?dil=en>

[54] Istanbul Water and Sewerage Directorate (ISKI) <http://www.iski.gov.tr/web/>

[55] Ankara Water and Sewerage Directorate (ASKI) (in Turkish),
<http://www.aski.gov.tr/tr/anasayfa>

[56] Electricity Generation Company (EUAS), <http://www.euas.gov.tr/Sayfalar/Eng/AnaSayfa.aspx>

[57] Republic of Turkey, Ministry of Economy, General Directorate of Free Zones, Overseas Investments and Services, Retrieved from, http://www.economy.gov.tr/upload/FA7B68AE-CBB2-2A00-B79D2D5CFBCBBDE5/General_info.pdf

[58] Republic of Turkey, Prime Ministry Press and Information General Directorate, Country Presentation, Retrieved From, <http://www.byegm.gov.tr/docs/Turkiye2011/english/026-27.htm>

[59] The Coordination Council for the Improvement of Investment Environment, Retrieved from, <http://www.yoikk.gov.tr/dosya/up/eng/OIZ-son.pdf>

[60] Republic of Turkey, Ministry of Science, Industry and Technology, www.sanayi.gov.tr

[61] Turkish - American Business Association - TABA / AMCHAM TURKEY, <http://amcham.org/>

[62] US Commercial Service in Turkey, <http://export.gov/turkey/>

[63] Italian Chamber of Commerce in Turkey, <http://www.cciist.com/>

[64] Netherlands Trade Directorate, <http://www.nttd.com.tr/>

[65] The official website of the Turkish Industry, Business Association (TUSIAD) <http://www.tusiad.org/>,

[66] The official web site of WYG Group, <http://www.wyg.com/>

[67] The official web site of COWI, <http://www.cowi.com/>

- [68] The official web site of Mott MacDonald, <http://www.mottmac.com/>
- [69] The official web site of Fichtner, <http://www.fichtner.de/en/activities.html>
- [70] The official web site of Ecorys, <http://english.ecorys.nl/>
- [71] The official web site of Grontmij, <http://www.grontmij.com.tr/>
- [72] The official web site of Eptisa Company, <http://www.eptisa.com/en/>
- [73] The official web site of Witteveen+Bos, <http://www.witteveenbos.com/en/information-marine-pollution-in-turkey>
- [74] The official web site of CDM Smith, <http://cdmsmith.com/>
- [75] The official web site of Dahlem Engineering Company, <http://www.dahlem-consult.com/>
- [76] The official web site of IGIP Consulting and Engineering Company, <http://www.igip.com/eng/home.htm>
- [77] The official web site of Mavi Consultants, http://www.maviconsultants.com/index_eng.html
- [78] The official web site of AF Consult Company, <http://www.afconsult.com/en/Worldwide/>
- [79] The official web site of Pell Frischmann Company, <http://www.pellfrischmann.com/>
- [80] The official web site of Yüksel Proje engineering company, <http://www.yukselproje.com.tr/>
- [81] The official web site of Temelsu Company, <http://www.temelsu.com.tr/>
- [82] The official web site of Suyapi Company, <http://www.suyapi.com/>
- [83] The official web site of Tempo Engineers and Consultants, <http://www.tempocom.tr/>
- [84] The official web site of Dolsar Company, <http://www.dolsar.com.tr/>
- [85] MWH Global and MWH South Europe, Statement of Qualifications, 2012
- [86] MWH Global organizational changes internal communication Dec 2012
- [87] MWH South Europe, Project Documentation

[88] Turkey Sustainable Energy Financing Facility project information, retrieved from, <http://www.turseff.org/>

[89] Turkey Mid-Size Sustainable Energy Financing Facility project information, retrieved from <http://www.midseff.com/>