Energie-Gegensätze innerhalb der Europäischen Union?
Energy-Dichotomies within the European Union?

Budak Dilli

Stellv. Generaldirektor im Bundesministerium für Energie und Natürliche Ressourcen, Ankara, Türkei.

Seit Mai 2000 ist Herr B. Dilli Mitglied des Vorstandes und Generaldirektor-Stellvertreter von TEAS.

Herr Dilli studierte Elektrotechnik an der Middle East Technical University und schloss sein Studium mit dem Master of Science ab.

Er durchlief fast alle Hierarchiestufen bei TEK und später bei TEAS. Er begann als Techniker und wurde später zum stellvertretenden Direktor, Gruppenleiter zum Abteilungsleiter im Bereich „Automatisierung der Energieerzeugung und Übertragungseinrichtungen, und 1997 zum stellvertretenden Generaldirektor von TEAS ernannt.

Sein Spezialgebiete sind Design, Projektierung und Errichtung von Kommunikations- und Automatisierungssystemen bei der Energieerzeugung und Übertragung.

Budak Dilli

Deputy General Manager, Ministry for Energy and Natural Ressources, Ankara, Turkey.

Mr. B. Dilli has been the Member of the Board & Deputy General Manager of TEAS since May 2000.

Mr. Dilli studied electrical engineering and took his master of science degree at the Middle East Technical University.

He assumed almost all the hierarchical levels at TEK and later TEAS starting from Chief Engineering to Assistant Manager, Group Manager and Department Head in the fields of communication and automation of power production and transmission facilities.

In 1997, he became the Deputy General Manager of TEAS.

His areas of specialisation are design, project and installation of communication and automation systems at power production, and transmission facilities.

Bemerkung: der Lebenslauf wurde vom Organisator gekürzt und frei übersetzt
Remark: the CV has been shortened and translated by the organisor.

Budak Dilli, Vize-Direktor im Direktorat für Energiefragen des türkischen Energieministeriums über die Planungen im türkischen Elektrizitätswesen

Energie-Drehscheibe Türkei

Ossiach – Als Schwellenland ist die Türkei derzeit eines jener Länder mit sehr rasch wachsendem Energiebedarf. Rund sechs Prozent pro Jahr wächst der Energiebedarf in der Türkei derzeit, erklärte Budak Dilli, Vize-Direktor im Direktorat für Energiefragen des türkischen Energieministeriums über die Planungen im türkischen Elektrizitätswesen in seinem Referat beim 3. Internationalen Energiesymposium der Verbundplan in Ossiach.

Bei Strom ist das Wachstum laut Dilli noch wesentlich stärker. Ein jährliches Verbrauchsplus von 8,5 Prozent führt dazu, dass der Absatz sich bis 2010 verdoppeln wird und eine weitere Verdoppelung bis 2020 zu erwarten ist. Das stellt die Türkei, die wenig natürliche Ressourcen besitzt, vor große Probleme. So wird die Importabhängigkeit von derzeit 65 auf 80 Prozent wachsen und es fehlt an finanziellen Mitteln zum Ausbau des Leitungsnetzes und der Erzeugung. Dilli: "Die Türkei ermuntert private Firmen in die Energiewirtschaft zu investieren um Finanzierungsmöglichkeiten zu schaffen. Schon jetzt werden im Rahmen verschiedener Finanzierungsmodelle insgesamt 16 Kraftwerke von Privaten verwirklicht. Parallel dazu wird das staatliche Elektrizitätswesen liberalisiert.

Vorbild Europäische Union

In ihren Liberalisierungsplänen orientiert sich die Türkei an der EU. Dilli: "Das Elektrizitätsmarktgesetz ist weitgehend fertig und entspricht der europäischen Richtlinie." Unbundling von Produktion, Übertragung und Verteilung, Schaffung einer Handelsplattform und eine transparente, nicht-diskriminierende Leitungsgesellschaft sind die Stichworte. Ein Regulator soll den Strommarkt überwachen und für die Genehmigung von Tarifen zuständig sein. Ergänzt wird die Liberalisierung durch Privatisierung wesentlicher Teile des Systems, so Dilli.

Zur Sicherung der langfristigen Energieversorgung will sich die Türkei als Drehscheibe für Energietransporte zwischen der kaspischen Region und Europa etablieren. Pipelines für Öl und Gas sollen über die Türkei geführt werden und sowohl die strategische als auch die energiepolitische Position des Landes verbessern. Im Elektrizitätsbereich sucht die Türkei den Anschluß an die das UCTE-Netz über drei Leitungen. Zwei sollen über Bulgarien geführt werden, eine dritte Leitung soll die Anbindung nach Griechenland bewerkstelligen. Damit., so Dilli, könne die Türkei in Zukunft auch wesentliche Beiträge zum gemeinsamen europäischen Netz leisten.

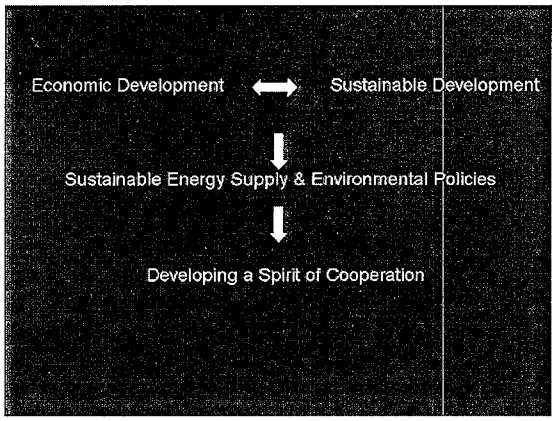
3rd International Energy Symposium
Dichotomies & Challenges

19th to 21st September, 2001
Stift Ossiach, Austria

ENERGY - DICHOTOMIES WITHIN THE EUROPEAN UNION?

By
Budak DÜLÜ

Deputy General Director
General Directorate of Energy Affairs
The Ministry of Energy and Natural Resources
The Republic of Turkey



"OUTLOOK OF TURKISH ENERGY SECTOR"

DUE TO THE H_GH ECONOM_C GROWTH AND THE NEW CONSUM_NG ATT_TUDES DEVELOP_NG AS A RESULT OF THE R_S_NG LEVEL OF WELFARE, PR_MARY ENERGY CONSUMPT_ON OF TURKEY _S _NCREAS_NG RAP_DLY AT AN AVERAGE YEARLY GROWTH RATE OF NEARLY 6%.

CONVENT_ONAL ENERGY RESOURCES EX_ST _N TURKEY BUT THESE ARE UNFORTUNATELY LOW _N QUANT_TY AND POOR _N QUAL_TY.

THEREFORE, TURKEY HAS TO _MPORT A S_GN_F_CANT PORT_ON OF THE ENERGY RESOURCES THAT _T NEEDS.

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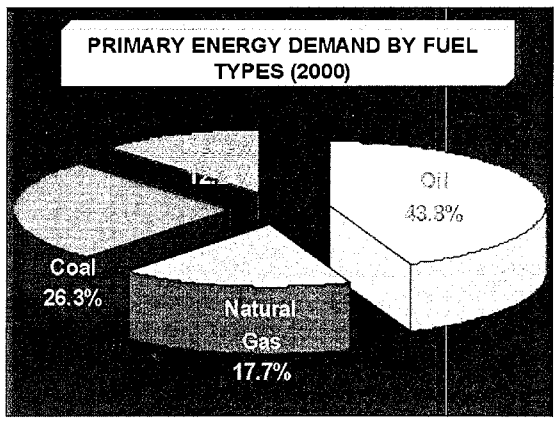
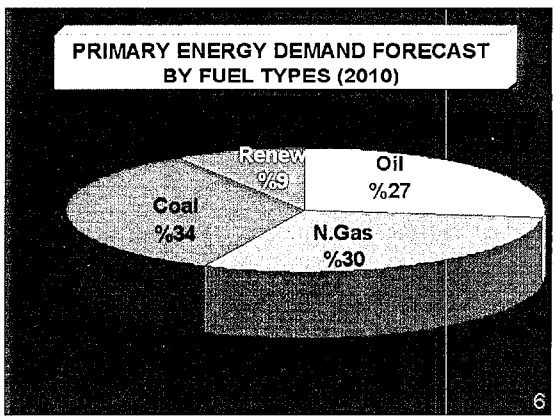


ENERGY DEMAND

- 2000 : 79.6 MTOE
- 2010 : 169 MTOE
- 2020 : 284 MTOE



IMPORT DEPENDENCY

YEAR	DOMESTIC RESOURCES (%)	IMPORTED (%)
2000	35	65
2010	26	74
2020	20	80

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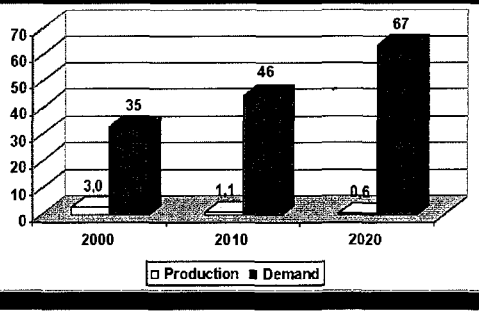
OIL DEMAND AND CRUDE OIL PRODUCTION FORECAST (Million Tones)



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Turkey's Natural Gas Demand Forecast

YEARS	GAS (Billion m³)
2000	15
2010	55
2020	83

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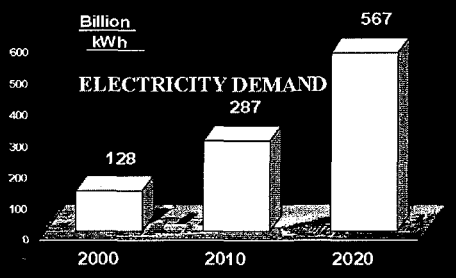
INSTALLED CAPACITY

INSTALLED CAPACITY:27257 MW (End of 2000)



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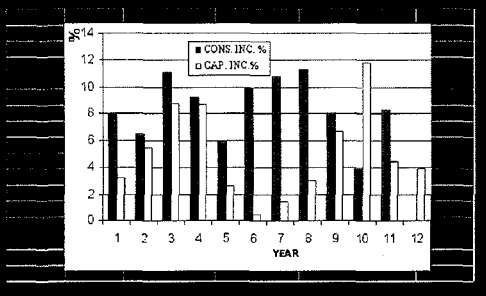
INCREASE IN LAST 12 YEARS



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ELECTRICITY DEMAND & INVESTMENTS

- THE ELECTRICITY GROWTH RATES ARE MUCH HIGHER IN TURKEY THAN IN EU.
- THE CURRENT RECESSION IN THE TURKISH ECONOMY CAUSED A SLOWDOWN IN THE POWER DEMAND.
- HOWEVER, WHEN WE LOOK AT THE HISTORICAL FIGURES, THE CURRENT SITUATION OF DEMAND IS AN EXTRAORDINARY ONE AND WE EXPECT THAT THE TREND CHARACTERIZED BY HIGH GROWTH RATE WILL PERSIST AND APPROACH THE FORESEEN AVERAGE VALUE IN COMING YEARS AS IT HAD HAPPENED IN THE PAST.
- TURKEY HAS SUPPLY SECURITY CONCERNS STEMMING FROM BOTH IMPORT DEPENDENCE AND HIGHER INVESTMENT REQUIREMENTS.

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ELECTRICITY DEMAND & INVESTMENTS

•Since, the magnitude of investment for Turkish power sector is too high and beyond the financing capability of the State, considerable effort has been given to encouragement of private sector to invest in power sector.
•The last two decades are marked by Turkey's efforts to restructure its power market in that direction.

- •BUILD-OPERATE-TRANSFER
- •BUILD-OWN-OPERATE
- •AUTOPRODUCER
- •TRANSFER OF OPERATING RIGHTS

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ELECTRICITY DEMAND & INVESTMENTS

- •BUILD-OPERATE-TRANSFER
  - •12 hydroelectric power plants,
  - •4 natural gas power plants and
  - •2 wind power plants

  have been commissioned.
- •BUILD-OWN-OPERATE
  - •contracts for 5 thermal power plants have been signed and the construction of 4 plants are already started
  - •expected to be commissioned on 2002 onwards with a total installed capacity of 5830 MW
- •AUTOPRODUCER
  - •152 plants generate an annual output of 16 billion kWh with an installed capacity 2995 MW
  - •agreements have already been signed for 67 autoproducers
- •TRANSFER OF OPERATING RIGHTS
  - •one hydro and one thermal power plant is transferred

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ELECTRICITY DEMAND & INVESTMENTS

•Rapidly increasing electricity demand and the growth potential makes Turkish power market very attractive especially for long-term strategic investors.
•Turkey will make good use of those replacement technologies in order to increase theutilization rate of its renewable resources.
•An incentive system that will allow for construction of generation facilities based on new and renewable energy resources, especially wind and hydroelectric resources will be established in Turkey.

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UNBUNDLING

•TURKEY ATTRIBUTES GREAT IMPORTANCE FOR IMPLEMENTING THE MARKET-ORIENTED REFORMS IN THE ENERGY SECTOR TO ESTABLISH A FAVORABLE ENVIRONMENT FOR THE PRIVATE SECTOR'S INFRASTRUCTURE INVESTMENTS AS WELL AS TO THE

•THE LAST BUT NOT THE FINAL STEP IN ENDEAVORS TO CREATE A SOUND ENVIRONMENT FOR PRIVATE SECTOR INFRASTRUCTURE INVESTMENTS IS THE

•ELECTRICITY MARKET LAW SUGGESTS UNBUNDLING OF GENERATION, TRANSMISSION, DISTRIBUTION AND TRADING ACTIVITIES OF ELECTRICITY.

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A COMPARISON BETWEEN EU DIRECTIVE (1996) AND ELECTRICITY MARKET LAW OF TURKEY

	Minimum Consumption Level is 9 GWh, by the beginning of February 2003	Minimum Consumption Level is 9 GWh, by the beginning of March, 2003
	Regulated Third Party Access, Negotiated Third Party Access, Single Buyer	Regulated Third Party Access
	Allowable through granting authorization according to the defined "criteria"	Allowable through granting authorization according to the defined "criteria"
	NOT IN ALL COUNTRIES	OK
	Authorization Tendering	Authorization
	Unbundling and/or separate accounts for electricity generation, transmission and distribution	Unbundling and/or separate accounts for electricity generation, transmission and distribution

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ROLE OF TURKEY IN INTERNATIONAL ENERGY TRANSPORT

ELECTRICITY INTERCONNECTIONS AND GAS & OIL TRANSPORT

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ELECTRICAL INTERCONNECTIONS

•INTERCONNECTIONS ARE IMPORTANT TO CONTRIBUTE MEETING GROWING DEMAND, SAVINGS ON INVESTMENTS & OPERATION COSTS, AS WELL AS ESTABLISH BETTER RELATIONS.

•BEING AT THE CROSSROADS BETWEEN CONTINENTS, TURKEY'S STRATEGIC POSITION GIVES THE POSSIBILITY OF PLAYING AN IMPORTANT ROLE IN THE EAST-WEST AND NORTH-SOUTH COOPERATION.

• TURKEY HAS A WIDE SELECTION OF OPPORTUNITIES BUT THE PRIORITY FOR US IS INTERCONNECTION WITH EUROPEAN GRID.

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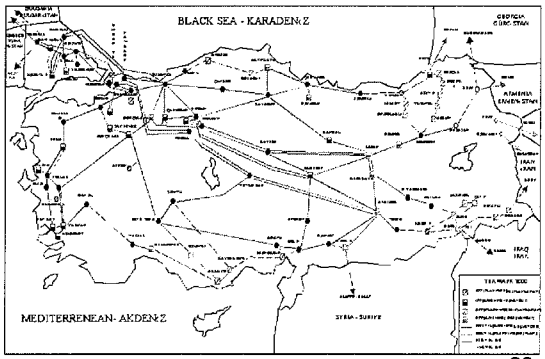
TURKISH EHV SYSTEM - TÜRKİYE ÇYG SİSTEMİ



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REGIONAL AND INTERREGIONAL PROJECTS WHICH TURKEY TAKES PART

EAST-WEST EUROPEAN INTERCONNECTION

- SOUTHEAST EUROPEAN INTERCONNECTION
- MEDITERRANEAN INTERCONNECTION
- FIVE COUNTRIES (ELIST) INTERCONNECTION
- BLACK SEA INTERCONNECTION
- CAUCASUS COUNTRIES INTERCONNECTION
- EAST-WEST CORRIDOR TO CONNECT BALKANS REGION WITH TURKEY (SECI)
- ECO COUNTRIES INTERCONNECTION

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INTERCONNECTION WITH UCTE

•TURKEY CONSIDERS THAT THE INTERCONNECTION OF ITS POWER SYSTEM TO UCTE VIA GREECE AND BULGARIA IS FEASIBLE AND SHALL PROVIDE TECHNICAL AND ECONOMIC BENEFITS, PARTICULARLY TO SOUTHEASTERN UCTE MEMBERS AND TURKEY.

•WITH THE PLANNED 3 *400 kV LINES, WITH CONSIDERABLE HYDRO MIX, WHICH CONTRIBUTE PRIMARY AND SECONDARY FREQUENCY REGULATION, TURKISH SYSTEM SHALL SAFEGUARD UCTE FROM ANY MAJOR DISTURBANCE.

•TURKISH ENERGY SYSTEM IS READY FOR PARALLEL OPERATION WITH VERY GOOD DESIGN AND OPERATION STANDARTS SINCE 1980s.

•TURKEY IS EXPECTING THE COMMENCEMENT OF ACTIVITIES OF AD-HOC TASK FORCE UNDER "SYSTEM DEVELOPMENT WORKING GROUP" TO STUDY TURKISH INTERCONNECTION AS DECIDED BY UCTE .

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MEDITERRANEAN INTERCONNECTION

•IN ORDER TO ENHANCE NORTH-SOUTH COOPERATION, ELECTRICAL INTERCONNECTION AROUND MEDITERRANEAN COUNTRIES IS CONSIDERED IMPORTANT.

• THIS PROJECT IS STUDIED BY SYSTMED GROUP ESTABLISHED BY UNIPEDE/MEDELEC. SECOND PHASE OF THE STUDIES IS UNDER PROGRESS AND TURKEY IS TAKING PART ACTIVELY.

• TURKEY IS IN FAVOUR OF THIS PROJECT IF THE ONGOING TECHNICAL AND ECONOMICAL STUDIES CONFIRM THE FEASIBILITY.

• IF THIS PROJECT IS TO BE REALIZED, CONNECTION OF TURKISH SYSTEM TO EUROPEAN GRID IS INEVITABLE. THEREFORE, UCTE CONNECTION IS A NECESSARY STEP.

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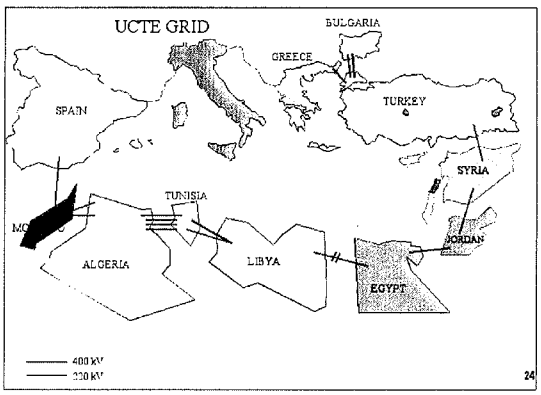

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OTHER INTERCONNECTION PROJECTS

•BLACK SEA INTERCONNECTION PROJECT

• PROSPECTIVE INTERCONNECTION OF UCTE+CENTREL WITH UPS GRID.

•IF THESE PROJECTS ARE TO BE IMPLEMENTED, THE ROLE OF TURKISH POWER SYSTEM WOULD BE ENHANCED DUE TO ITS GEOGRAPHICAL LOCATION AND IMPORTANCE.

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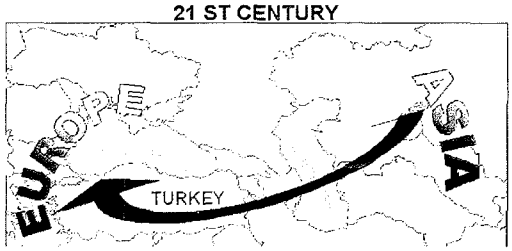
EAST-WEST ENERGY CORRIDOR OF 21 ST CENTURY



Due to the advantage of geographical location, Turkey is canditate to be an EAST-WEST ENERGY CORRIDOR

Turkey gives top priority to the Caspian-Mediterranean crude oil pipeline (Baku-Tbilisi-Ceyhan) and the Trans-Caspian-Gas pipeline from Caspian via Turkey to Europe. These pipelines will;

- strengthen the independence and prosperity of the new Caspian states by ensuring the free flow of hydrocarbons to the world market,
- encourage market economy and democratic developments,
- stabilise the region by building the economic linkages between the countries,
- help to diversify and secure the energy supply of Turkey and our European partners

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EUROPEAN GAS DEMAND/ IMPORT DEPENDENCY

•Over the next two decades, nearly 45% increase in total energy demand is expected in Europe, while natural gas will increase its share in primary energy supply from 21 % in 1998 to around 27 % by 2010.

•Taking a glance at Europe's natural gas demand, it is evident that there will be a supply deficit towards 2010 and beyond.

•The gas rich Caspian countries can meet a portion of this demand with their projected gas production in the near future if economic and safe transportation systems are established

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INOGATE

The strategic potential role of Turkey, in transporting oil/gas to European markets, has recently been assessed by theEU Commission.

Within the framework of the EU INOGATE Program (Interstate Oil and Gas Transport to Europe), the activities for a bi-directional gas pipeline between Turkey and Greece has been initiated, with the objective of establishing theSouth European Gas Ring allowing the resources of the Caspian Basin, Russia, the Middle East, Southern Mediterranean countries and other international sources to flow to European markets, through Turkey, Greece and Italy.

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Akıbrak

CONCLUSION

•Turkey, an ally of the West, and being in the process of rapid integration with the world economy, has started a comprehensive restructuring endeavor in the energy sector.
•In today's power markets where globalisation and competition plays an increasing role, supply security, economic growth and social targets must be harmonised effectively. Following topics can be considered as basic instruments in this context;

- Restructuring of the power sector (privatisation, demonopolization)
- Removal of Governmental intervention in the markets
- Creating a better regional/global cooperation for the deployment of new technologies
- Enhancing energy efficiency

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