

Pakistan Economic Forum Energy Panel

Position Paper on Energy

Energy Expert Group – Core Committee

Name	Designation	Organization
Mr. Farooq Rahmatullah	Chairman	Energy Expert Group
	Chairman	Pakistan Refinery Limited
	Former Chairman & MD	Shell Pakistan Limited
	Former Chairman	OGDCL
	Former Director General	Civil Aviation Authority
Mr. Aliuddin Ansari	Co- Chairman /President & CEO	Engro
Mr. Mumtaz H. Khan	Chairman & CEO	Hascol Petroleum Limited
Mr. Abbas Bilgrami	CEO	Progas Energy Limited/ Advisor SNG- LNG SSGC LPG and SSGC
	MD	Pakistan Refinery Limited
Mr. Javed Akbar	Director	Dawood Hercules and Engro Corp
Mr. Salman Madani	Brand Manager	Hascol Petroleum Limited
Ms. Sana Mehmood	Strategy Division	KESC

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Energy Expert Group – Sector Specialist Group

Name	Designation	Organization
Mr. Moin Raza Khan	Lead Sectoral Head	DMD Operations Pakistan Petroleum Limited
Peter Settlinger	Co- Lead Sectoral Head	Chairman PPEPCA and CEO OMV Pakistan
Mr. Akhtar Hussain	Lead Sectoral Head	MD Pakistan Refinery Limited
Mr. Mumtaz H. Khan	Lead Sectoral Head	Chairman & CEO Hascol Petroleum Limited
Mr. Sohail Waqar Siddiqui	Co-Lead Sectoral Head	Chairman PSO
Mr. Nadeem Babar	Lead Sector Specialist	CEO Orient Power/ Saba Power
Saleem Arif	Co-Lead Sectoral Head	Former GM Planning WAPDA WAPDA
Perwez A. Khan	Co-Lead Sectoral Head	CEO Jeh Power
Sana Mehmood	Co-Lead Sectoral Head	CEO Jeh Power
Syed Yawar Ali	Lead Sectoral Head	Chairman Nestle Pakistan
Mr. Shahid Abdullah	Co-Lead Sectoral Head	Chief Executive Sapphire Fibres Limited
Mr. Abbas Bilgrami	Lead Sectoral Head	CEO Progas Energy Limited /Advisor SNG- LNG SSGC LPG and SSGC
Sohail Qureshi	Co-Lead Sectoral Head	CEO SHV
Mr. Irfan Ahmad	Lead Sectoral Head	Vice President Divisional Head Renewables Energy Sector Siemens Pakistan
Mr. Javed Akbar	Co-Lead Sectoral Head	Director Dawood Hercules and Engro Corp
Mr. Shamsuddin Shalikh	Lead Sectoral Head	CEO Smith Engro Coal Mining Company Limited
Mr. Ghulam Rasool Athar	Lead Sectoral Head	Director Pakistan Atomic Energy Commission
Nominer of Dr. Anwar Parvez Chairman Atomic Energy Commission	Lead Sectoral Head	Applied Systems Analysis Division Pakistan Atomic Energy Commission
Mr. Vaqar Zakaria	Lead Sectoral Head	CEO Hagler Bailly
Mr. Anif Allaudin	Co-Lead Sectoral Head	Co-Sectoral Head Alternate Energy Development Board
Mahmud Ali Durrani	Lead Sectoral Head	National Security Advisor Ambassador
Mr. Adnan Tareen	Observer /Informal Advisor	Power Engineering Pakistan
Mr. Abdullah Yusuf	Lead Sector Specialist	Chairman Pakistan Business Council
Mr. Sayem Ali	Lead Sector Specialist	Economist ECONOMIST FORUM

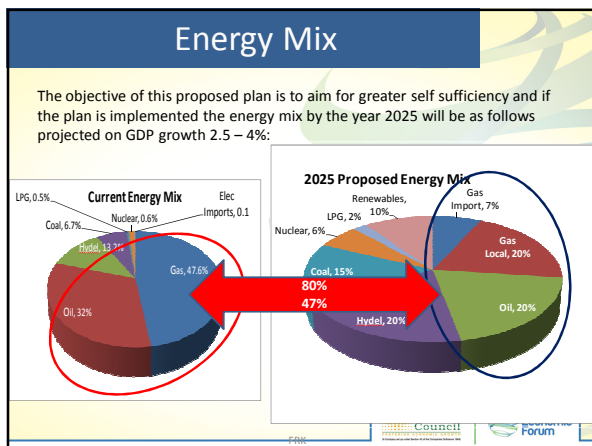
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To provide a road map for Pakistan to achieve greater energy self sufficiency by pursuing policies that are sustainable, provide for energy security and conservation, and are environmentally friendly.

Integrated Energy Plan 2012-2025

VISION

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Implications of business as usual

- Unless there is a political will and resolve to implement an integrated energy plan the country will face growing crisis on the energy front
- With nominal GDP growth projections of 2.5 – 4% the energy consumption by the year 2025 would be 142 mtoe which translates to a Power Requirement of 38,000 MW. Oil Requirement will be 40 MMTOE, Gas Requirement 67 MMTOE
- The total energy import bill in 2025 at crude oil at US\$ 100/ bbl will be **US\$ 90 billion**

77% Hydrocarbon Dependency

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Summary of Recommendations

- **Formation of Integrated Energy Ministry**
- **E&P sector** - Incentivizing industry to:
 - Invest in development of Tight Gas
 - Invest in development of Shale Gas and Oil
- **Energy Infrastructure:**
 - Development of LNG import infrastructure
 - Natural Gas Pipeline and Electricity import and export infrastructure
- **Refining Sector:**
 - Providing clarity and long term vision to encourage investment in deep conversion refineries
 - To make the country self sufficient in refining capacity
 - To protect Foreign Investors under the Economic Reform Act 1992

MHK



Summary of Recommendations

- **Downstream: Oil and LPG**
 - Government to increase storage infrastructure by creating strategic storage reserves
 - Eliminate Freight pool
 - Make Distribution Margin a percentage of selling price in order to encourage investment in petroleum infrastructure
 - All long distance movement of oil to be through pipelines or rail. Long distance road movement to be minimised and discouraged.
 - Pricing of LPG to be based on Import Parity Pricing

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Summary of Recommendations

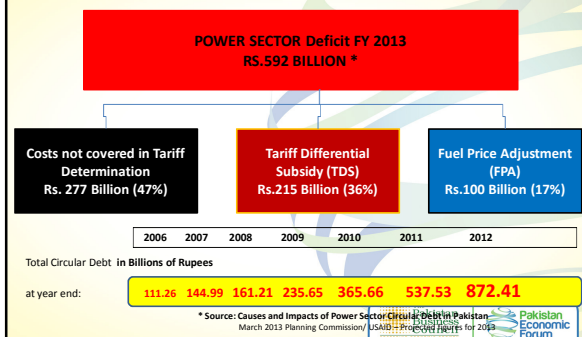
➤ POWER SECTOR

- **Elimination of Circular Energy Debt:**
 - To utilise cheapest available resources for power generation
 - To have a tariff structure which reflects full cost recovery (not just NEPRA determined tariffs). Full cost recovery tariffs to be charged from power consumers.
 - Eliminate indirect subsidies. Only provide direct subsidies to lifeline customers.

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THE ORIGIN OF THE CIRCULAR ENERGY DEBT



Summary of Recommendations

- **Power Sector:**
 - It is recommended that the power sector in Pakistan be restructured to become competitive and viable:
 - **Supply of power must be depoliticized** – therefore while NTDC/WPPO to continue functioning as the state owned high voltage power transmission company, with open access for all power suppliers at a regulator controlled grid tariff, but its role as central power purchaser to be diluted and eventually eliminated, as power purchase is progressively decentralized to the distribution companies.
 - **To overcome the circular energy debt and High T&D losses - All power distribution and marketing companies (DISCOs) to be privatized**, with each company purchasing power to consumer segments within its distribution circle while providing open access to third party power suppliers against a regulator controlled grid tariff to create an open and competitive market.
 - **Power theft and non payment of electricity bills to be declared a non bailable offence** with a high penalty



Summary of Recommendations

- **Power Sector (Contd:)**
- **Current installed capacity is 22,477 MW dependable capacity is less than 14,000 MW, unconstrained demand of c. 18,000 Mw projected to increase to 38,000 Mw by 2025 based on 4% GDP growth rate .**
 - Upgrade Public Sector Thermal Power Generating Capacity will result in 2,500 Mw of additional power from existing capacity without the need for additional fuel.
 - New Thermal capacity (Oil and Gas) to be increased by 700 Mw by 2016. Evaluation to be carried out to convert these to imported / local coal
 - Development of indigenous coal and conversion of oil fired power plants to imported/local coal.
 - Hydel capacity to be increased from 6,500 Mw to 30,000 Mw by 2025.
 - Regional power and gas grid to be developed to facilitate import and export of energy, increase energy security and energy diversity and to bring in cheaper power and natural gas in the short and medium term.
 - To achieve the investment requirements for the hydro power expansion and infrastructure development a long term capital fund should be developed with the assistance of IFI's ,Sovereign Funds, from Expatriate Pakistanis and local investors.



Summary of Recommendations

• Power Sector (...contd):

- **Renewable-** Wind (Potential: 50,000 Mw) , Solar (Potential In excess of one million Mw).
 - Increase Hydel as part of the energy mix and improve dependability by increasing water storage capacity
 - Off Grid Solutions
 - Solar Water Heaters to replace all gas heaters throughout the SSGC and SNGPL systems thereby releasing gas for power generation
- Nuclear power production is expected to increase from 787 Mw to 5,430 Mw* by 2025 which is expected to be c. 6% of the Energy Mix and 15% of total power generation.
- Take serious measures to develop Thar Coal immediately and allow imported coal to displace fuel oil in power generation.

* Figures courtesy Pakistan Atomic Energy Commission



Summary of Recommendations

➤ Promote Energy Efficiency and Conservation

- **The Pakistan Energy Efficiency and Conservation Act** has not been passed in the past two governments. This must be done as a matter of priority. This will provide the legal framework to ensure energy efficiency and conservation programmes can be implemented. Including building codes, energy audits etc
- Provide gas to only efficient CCGT power plants and discourage use of natural gas in captive power generation for plants which do not meet the desired efficiency ratings.
- Public sector thermal generating plants operate at avg. efficiency of 27-28%. This needs to be improved to at least 45% and 51% (for CCGT) through a programme of investment and upgradation.
- Transmission and distribution losses (including power theft) average at least c.20% excluding commercial losses incurred on account of low recoveries from consumers. These need to be reduced to internationally accepted norms of 6-8%.
- Unaccounted for Gas (UFG) in gas transmission and distribution network is currently at 10-11% and should be reduced in phases within 3 years to 4%.
- Industry and all commercial establishments to undergo energy audits.



Summary of Recommendations

- **Prioritisation of Natural Gas supply:** New Gas Allocation Policy 2012 has been introduced, whereby power sector has been moved from 3rd priority order to 2nd replacing the fertilizer sector. Prioritization of gas allocation based on sector efficiency and availability of alternate fuels. We would propose that there be a further change:
 - Power generation
 - Industry
 - Commercial
 - Domestic – cooking only
 - CNG for urban public transport only
- **Price parity for competing fuel will encourage efficient use of scarce resources**
 - CNG
 - Automotive LPG
 - Natural gas pricing provides an indirect subsidy of over USD 2.5 billion
 - Provide resources for Up gradation of natural gas pipelines and national grid.

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Summary of Recommendations

• Protecting the consumers by changing the fuel mix and thereby reducing the cost of generation.

- By incentivising power generators to turn into efficient convertors
- Reducing line and commercial losses by improving distribution systems
- Power producers need to be efficient convertors this needs to be enforced by changing the power purchase agreements to ensure efficiency. Regulators need to modify the PPA to reflect this.
- **Give consumers a choice for selecting suppliers of electricity and gas by promoting an electricity market to increase competition and improve standard of service and reducing the impact of monopolies**
- Educate consumers on energy issues and to involve them in a dialogue. They must be represented in the Regulatory bodies.
- **Strengthen regulatory bodies to ensure independence and provide consumer representation on their Board's.**

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