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# WBG Energy Sector Directions and Challenges of Energy Subsidy Reform

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# ENERGY SECTOR DIRECTIONS PAPER, 2013

## “Towards a Sustainable Energy Future for All”



# OBJECTIVE

**Support client countries in securing the **affordable, reliable, and sustainable** energy supply needed to end poverty and build shared prosperity.**

- Closely aligned with SE4ALL initiative

# WHAT'S NEW?

- From projects to sector wide planning
- Scale-up of engagement in natural gas
- Unambiguous position on coal projects
- More nuanced position on renewable energy
- Clear priority to access in low access countries

# HYDROPOWER

- Given

- 90% (70%) of hydropower potential in SSA (SAR) remains unexploited
- Hydropower is largest source of affordable renewable energy in many energy markets
- Delivers adaptation as well as mitigation benefits
- Provides storage to balance other renewables

- WBG firmly committed to responsible development of hydro
  - Including both large and small hydropower (no longer a distinction)
  - Including both run-of-river and reservoirs
  - Based on multi-purpose vision and informed by nexus
  - Environmentally and socially sustainable, including benefits-sharing with local communities

# NATURAL GAS

- Because natural gas is
  - The fossil fuel with lowest carbon intensity, making it a useful transition fuel towards a low-emissions future
  - Well suited for both base load and peak load power
  - Well suited for complementing wind and solar
- WBG will scale up engagement in natural gas
  - Policy and regulatory support, risk-mitigation instruments, IFC investments across the supply chain, gas flaring reduction through GGFR

# COAL

- WBG will help identify alternatives to Greenfield coal power
  - Will provide financial support for greenfield coal power generation projects only in rare circumstances to meet basic energy needs in situations with no feasible alternatives to coal and no other sources of financing
- WBG will consider supporting rehabilitation of existing coal plants to increase efficiency, subject to screening criteria
- WBG will consider supporting greenfield coal with operating carbon capture

# RENEWABLE ENERGY

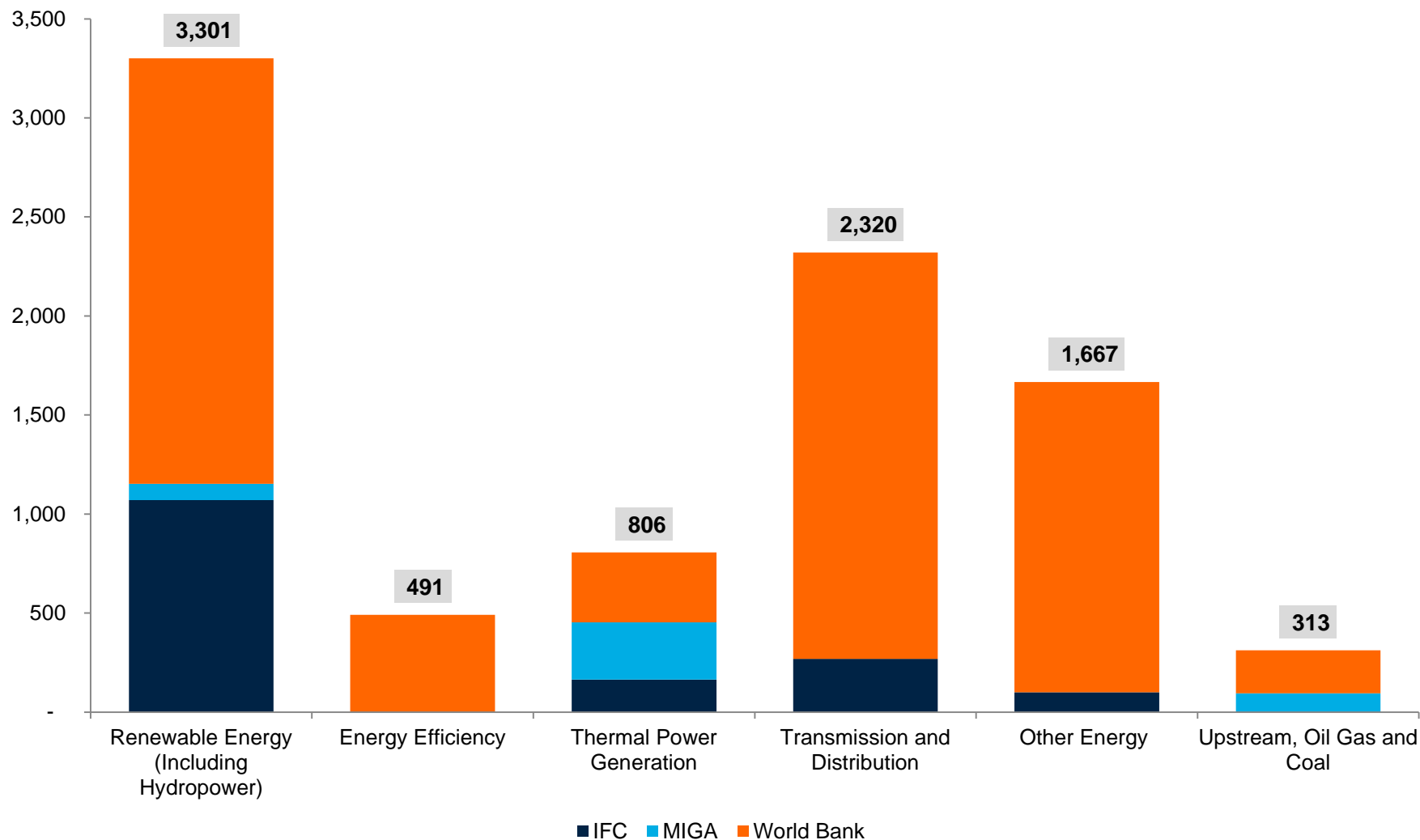
- Foundations for renewable energy
  - Renewable Energy Resource Mapping
  - Transmission expansion
- Continue to promote wind and solar
  - Distributed as well as grid
  - Economic particularly in small, isolated off-grid markets
- Scale up geothermal
  - Low cost, base load, could be large scale
- Make use of biogas
  - Clean household energy

# FRAMEWORK TO GUIDE WBG FINANCE

|      |      | GHG EMISSIONS  |  |
|------|------|--|--|
|      |      | LOW  | HIGH   |
| COST | LOW  | <p>1. Strong case for support (e.g. energy efficiency, hydro, geothermal, solar/wind in high-cost environments)</p>  | <p>2. Support in rare circumstances if</p> <ul style="list-style-type: none"> <li>a) Meets critical energy needs</li> <li>b) No lower-cost alternatives available in time or to scale</li> <li>c) No alternative finance.</li> </ul> <p><i>Coal Screening Criteria still apply</i></p> |
|      | HIGH | <p>3. Support under certain conditions</p> <ul style="list-style-type: none"> <li>a) Concessional finance available to cover cost differential</li> <li>b) Strong country ownership</li> </ul> | <p>5. No case for support</p>  |
|      |      | <p>4. Support possible if strategic potential for technological innovation and global demonstration effects</p>  |  |

# WBG FY'14 Energy lending – Sectors

US\$m



# WHY ARE ENERGY SUBSIDIES ESTABLISHED?

- Increase energy access
  - Low energy pricing aims to give poor population more access to energy. It also protects access to cleaner energy sources (e.g. LPG versus biomass) although it is not the most effective way to do so.
- Contribute in improving living conditions
  - Subsidies leave money in the pockets of consumers that they would otherwise not have to spend
- Protect national economy
  - Favors the development of energy-intensive domestic industries (e.g. petrochemicals, cement, etc.)
- Protect domestic firms from competitive pressure thus increasing country's competitive advantage
- Subsidies are largely a political solution for economic problems
  - Drive government and politicians popularity
  - Keep a restive populace happy

# WHY REFORM IS NEEDED (IMF, 2013A)

- Depress growth
  - reduce investment in the energy sector
  - crowd-out critical public spending
  - over-allocate resources to energy intensive sectors
- Exert pressure on balance of payments of energy importers
- Create negative externalities (for example, global warming)
- Reinforce inequality

# Top 25 countries for energy subsidies

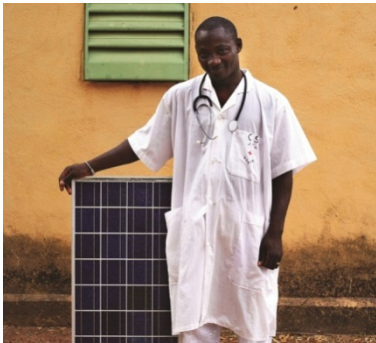
- Worldwide energy consumption subsidies estimated at \$492 billion in 2011 (IMF, 2013b)
- Worldwide producer subsidies estimated at \$100 billion (according to GSI)
- Worldwide subsidies estimated at \$1.9 trillion on a 'post-tax' basis - factoring in the negative externalities from energy consumption (IMF, 2013b)

| Countries    | Subsidies in 2010 (billion USD) (IEA, 2011) |
|--------------|---|
| Iran         | 80.8  |
| Saudi Arabia | 43.5  |
| Russia       | 39.2  |
| India        | 22.3  |
| China        | 21.3  |
| Egypt        | 20.3  |
| Venezuela    | 20.0  |
| UAE          | 18.2  |
| Indonesia    | 15.9  |
| Uzbekistan   | 11.9  |
| Iraq         | 11.3  |
| Algeria      | 10.6  |
| Mexico       | 9.5   |
| Thailand     | 8.5   |
| Ukraine      | 7.7   |
| Kuwait       | 7.6   |
| Pakistan     | 7.3   |
| Argentina    | 6.5   |
| Malaysia     | 5.7   |
| Bangladesh   | 5.0   |
| Turkmenistan | 5.0   |
| Kazakhstan   | 4.3   |
| Libya        | 4.2   |
| Qatar        | 4.2   |
| Ecuador      | 3.7   |

# Challenges of subsidy reform

- Reform energy prices to reach cost recovery levels
- While improving social protection...
- ...and allocation of resources
- Ensuring the quality and reliability of energy supply
- In order to sustain inclusive economic growth and shared prosperity

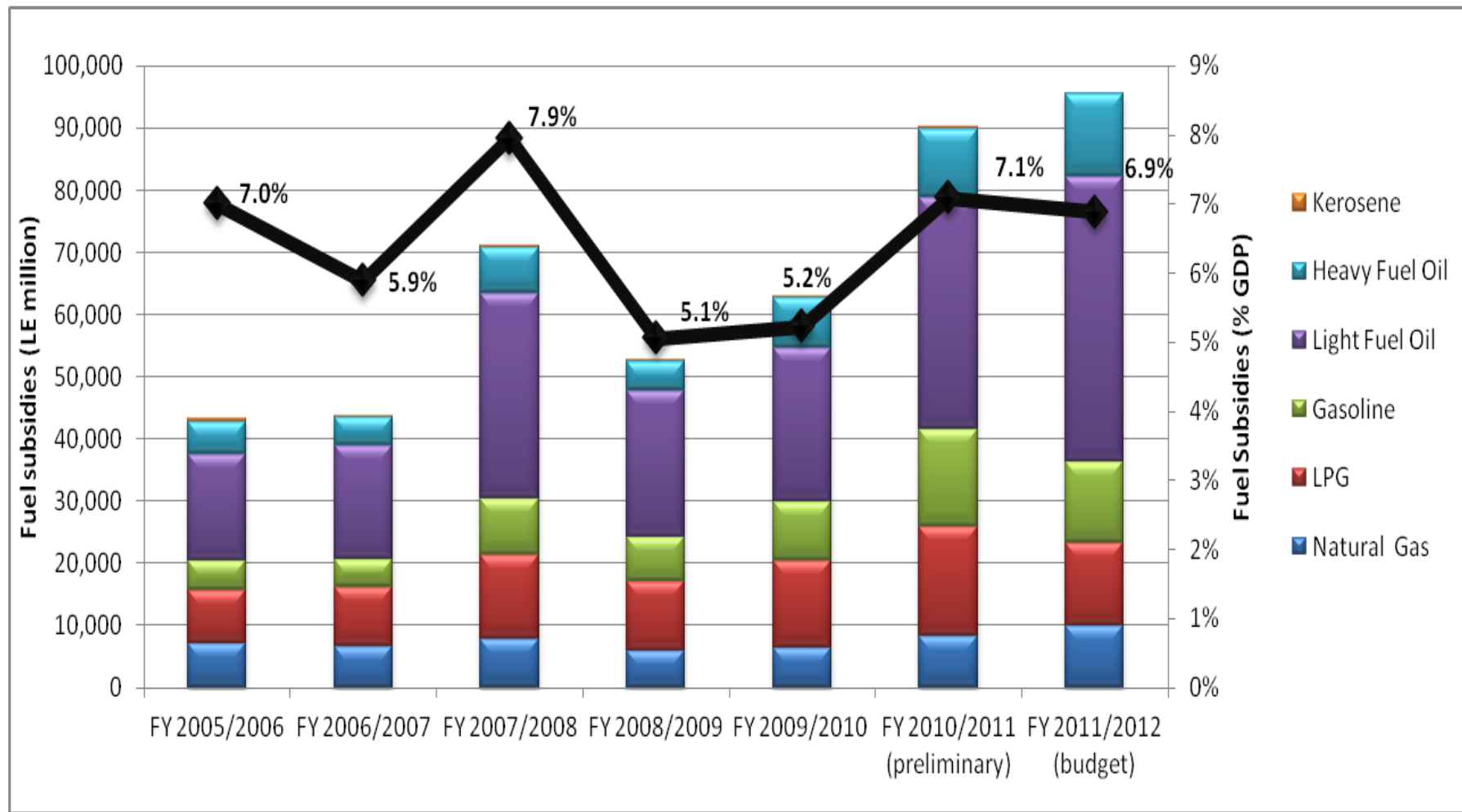
# ESMAP's Energy Subsidy Reform and Delivery Facility (FY2014-2016)



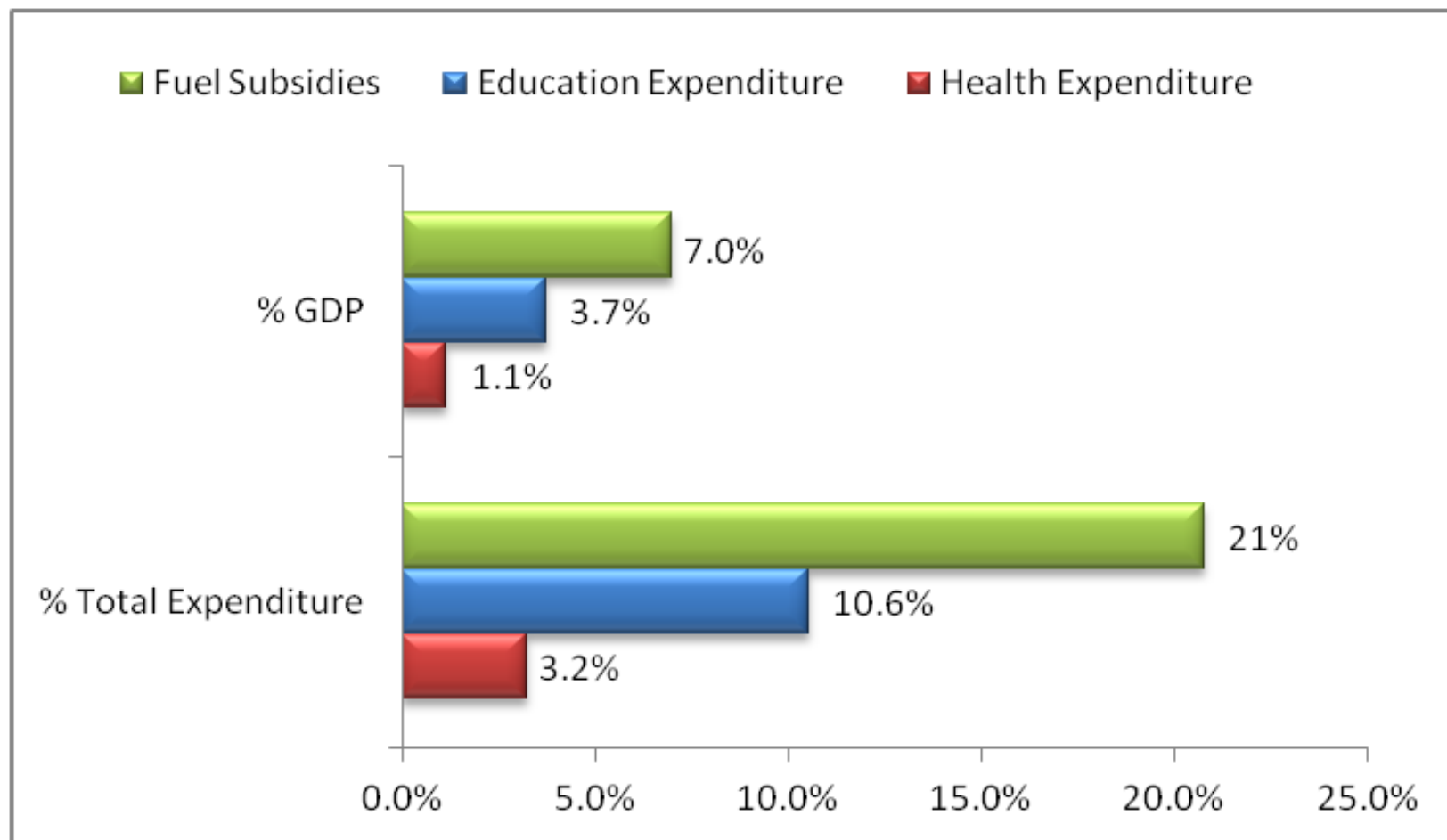


# Egypt: Energy Subsidy Reforms

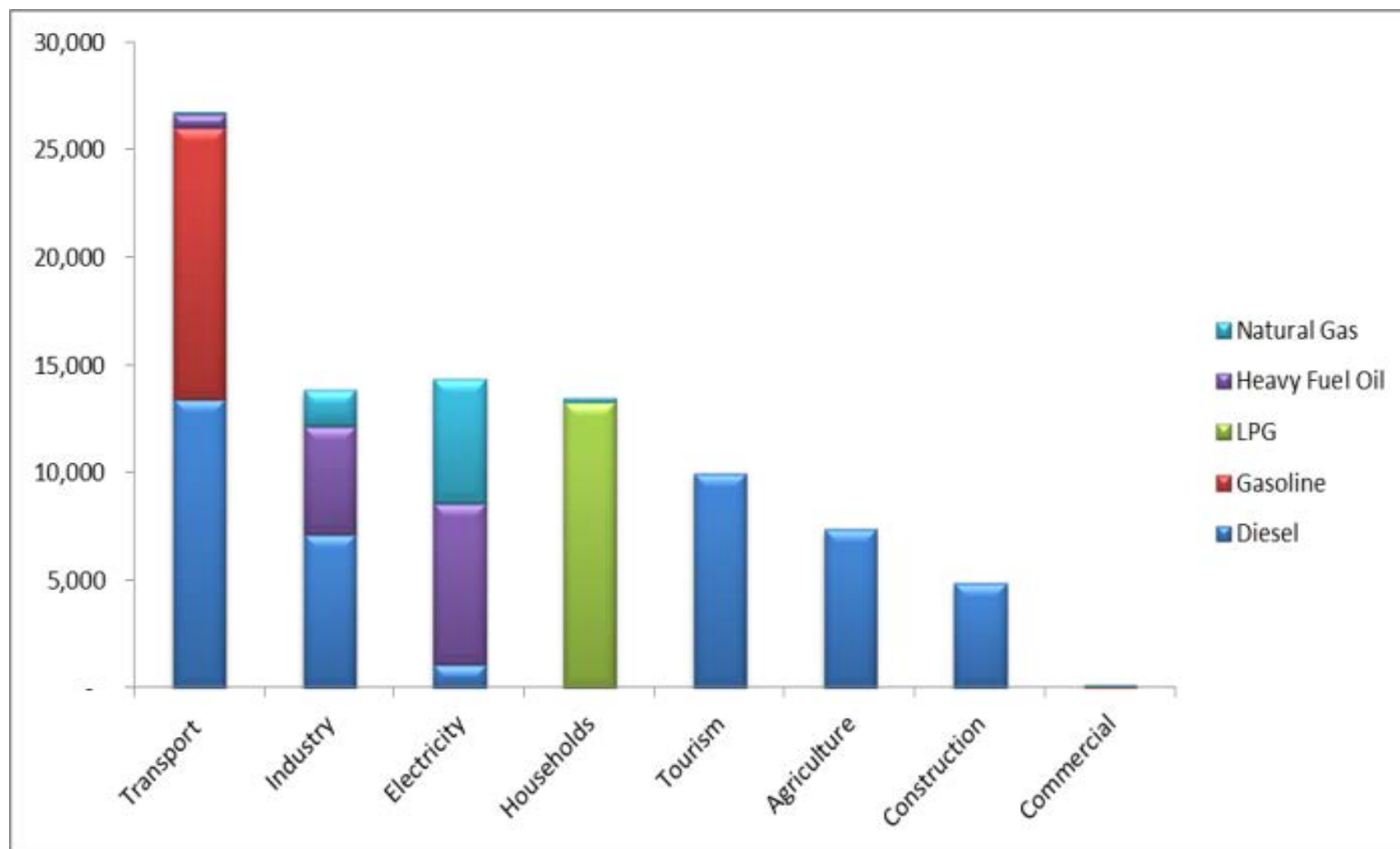
# Motivation: Energy subsidies are a significant fiscal drain



## ... crowd out social expenditures



...and impact a wide range of sectors directly and indirectly



# Learn from other countries experience

|   | Indonesia                                    | Malaysia  | Iran  | Brazil   | Dominican Republican                           |
|---|--|---|---|--|--|
| <b>Income Level</b>                         | Lower-middle Income                          | Upper-Middle Income                                     | Lower-middle income                                     | Upper-Middle Income                            | Upper-Middle Income                            |
| <b>Subsidized Fuels/Services</b>            | Electricity, Kerosene                        | Gasoline, Diesel, Electricity                           | Electricity, Kerosene, Gasoline, Diesel                 | Gasoline, Diesel                               | Electricity, LPG                               |
| <b>Phasing Out (% GDP savings per year)</b> | 2005:<br>3.5% of GDP in two years            | 2008:<br>1.3% in one year                               | 2010:<br>15% in one year                                | 2002<br>removal of LPG subsidy                 | 2008:<br>3% of GDP in one year                 |
| <b>Compensatory measures</b>                | Unconditional cash transfers<br>19.2 million | Smart cards<br>public transport operators and fishermen | Smart cards, Unconditional cash transfers<br>73 million | Conditional cash transfer with a gas component | Conditional cash transfer with a gas component |
| <b>Risks</b>                                | Targeting<br>Exclusion<br>Errors and Leakage | Black market  | Black market  | Targeting<br>Exclusion<br>Errors and Leakage   |  |

# Frame the immediate & medium-term activities

- Deploy smart card policies



- Mitigate the impact



- Cushion the blow



# Fill Your Reform with Communication

