

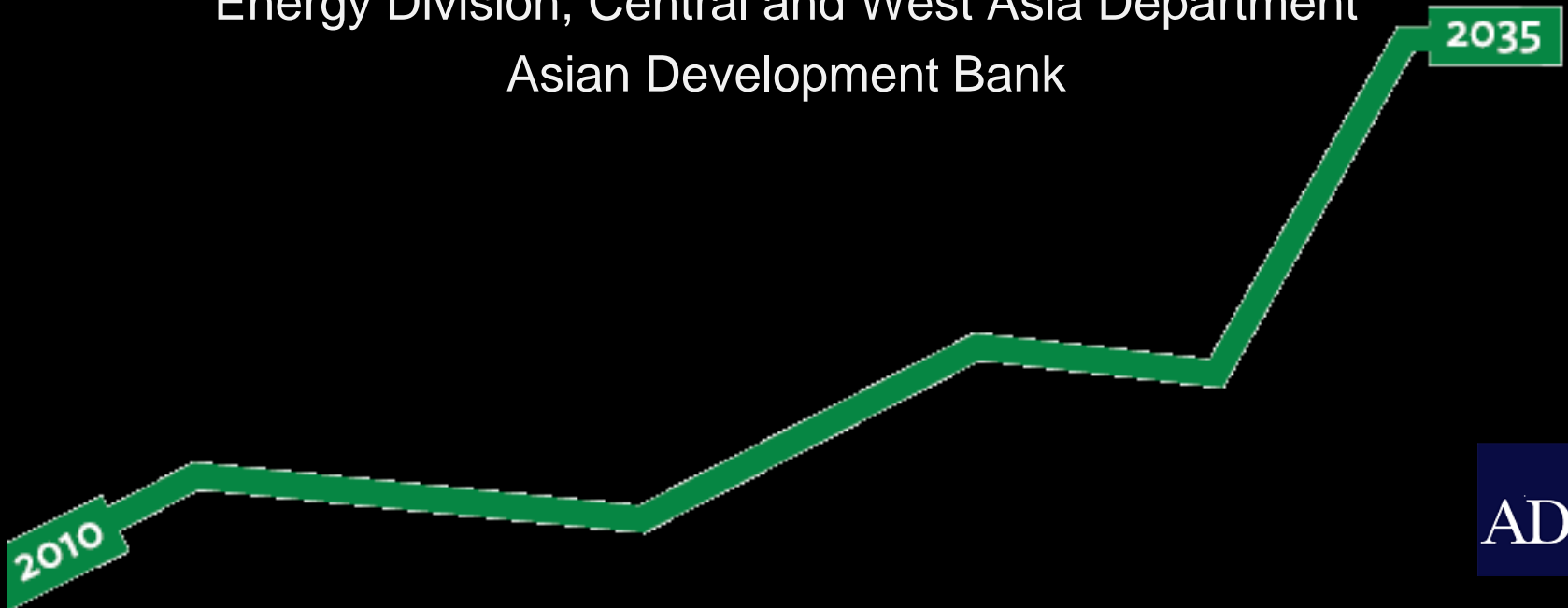
# Energy Saving Opportunities in Central and West Asia

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Asian Development Bank



# Coverage of the Outlook

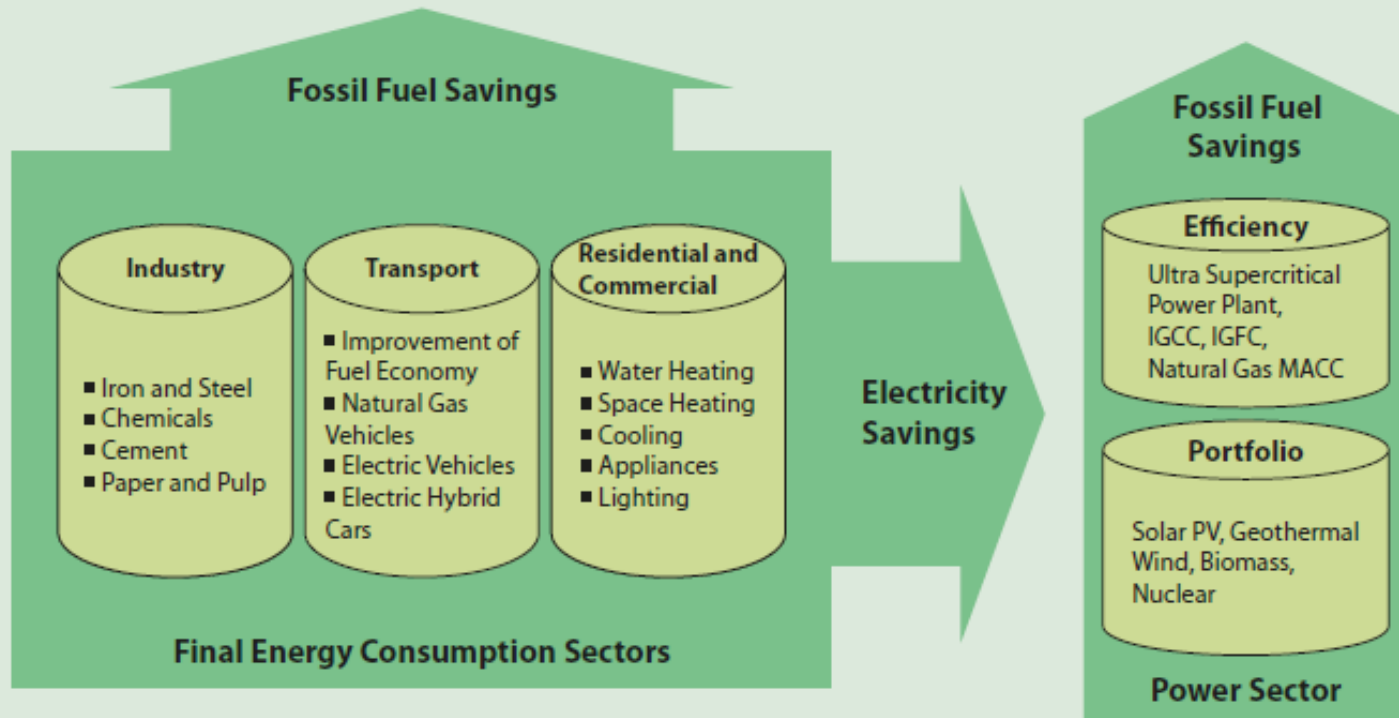
- **Time Frame: 2010–2035**
- **Geographic Coverage:**
  - **Developing Asia**
    - Central and West Asia
    - East Asia
    - Pacific
    - South Asia
    - Southeast Asia
  - **Developed Group:** (Australia; Japan; and New Zealand)
- **Main Content:**
  1. Energy supply and demand outlook
  2. Electricity outlook
  3. CO<sub>2</sub> emissions outlook
  4. Energy investment outlook
  5. Policy implications

# Outlook Cases

	<b>Business-as-Usual Case</b>	<b>Alternative Case</b>
Final Energy Demand	<ul style="list-style-type: none"> <li>• Current levels of technology applications</li> <li>• Reflects existing policies on future energy demand and energy choice</li> </ul>	<ul style="list-style-type: none"> <li>• Deployment of advance technologies</li> </ul>
Transformation Sector	<ul style="list-style-type: none"> <li>• Current trends in the development of new and renewable energy sources will continue</li> <li>• Nuclear development considered are those for which at least preparatory work for construction of power plants are already being made</li> </ul>	<ul style="list-style-type: none"> <li>• RE and nuclear development based on current government plans</li> <li>• Installation/deployment of highly efficient/advanced thermal power technologies</li> </ul>
Investment Requirements	<ul style="list-style-type: none"> <li>• Supply-side investments requirements</li> </ul>	<ul style="list-style-type: none"> <li>• Supply-side and demand-side (energy efficiency) investment requirements</li> </ul>

# Energy Savings Potential

## Total Fossil Fuel Savings Potential



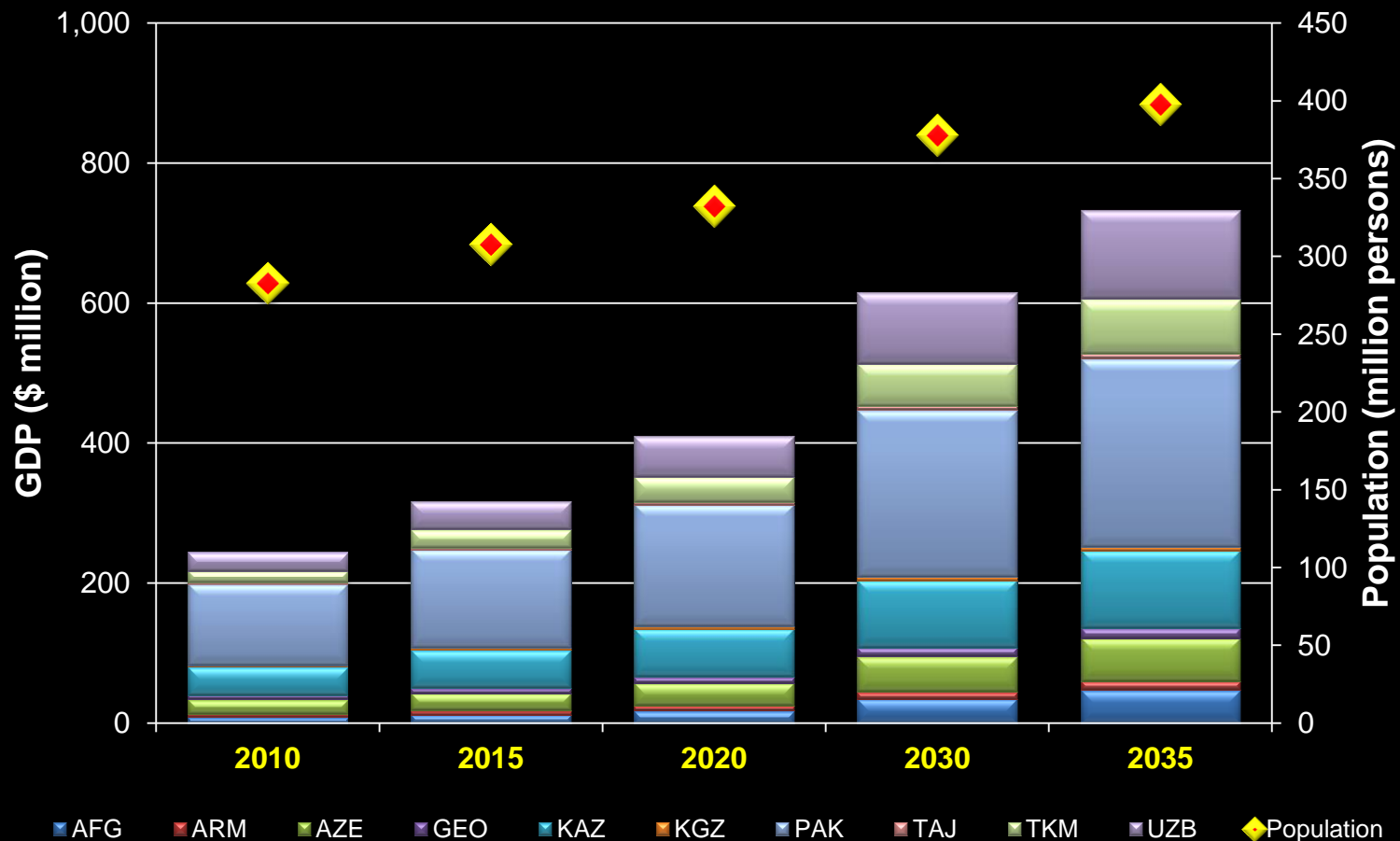
- **Government Policy and Regulation**
- **Technology Innovation**
- **Energy Security**  
*(less dependency on import)*
- **Environmental Concerns**  
*(less carbon emission)*
- **Economy**  
*(less expenditure on fuel import)*

# Growth in Central and West Asia

Average Annual Growth Rate (2010–2035)

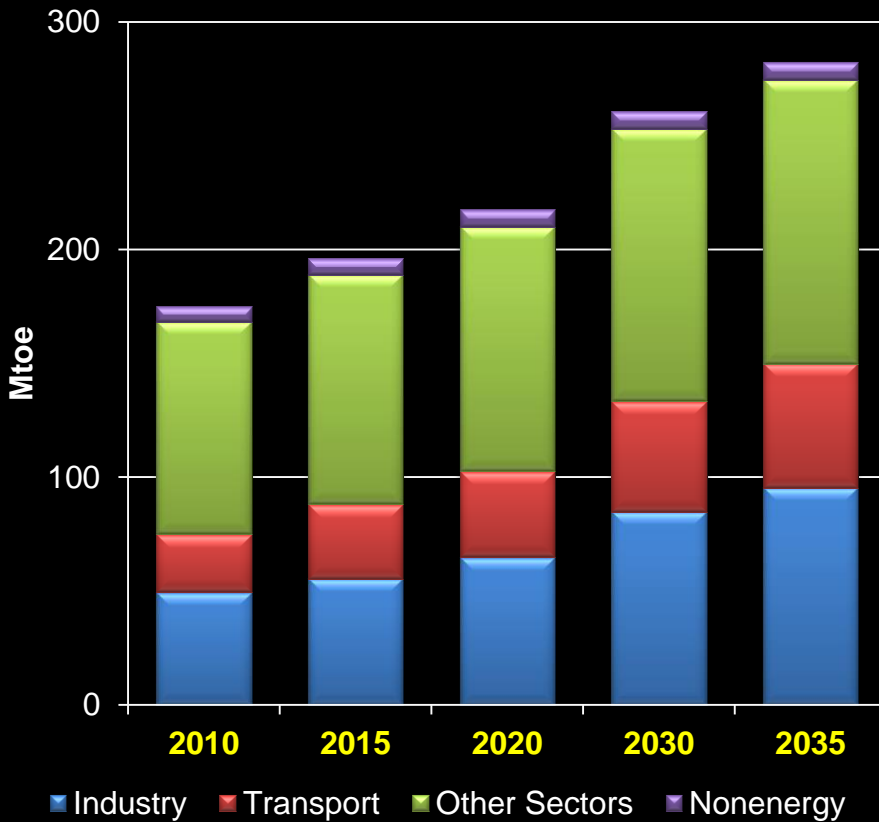
**GDP 4.5%**

**Population 1.4%**

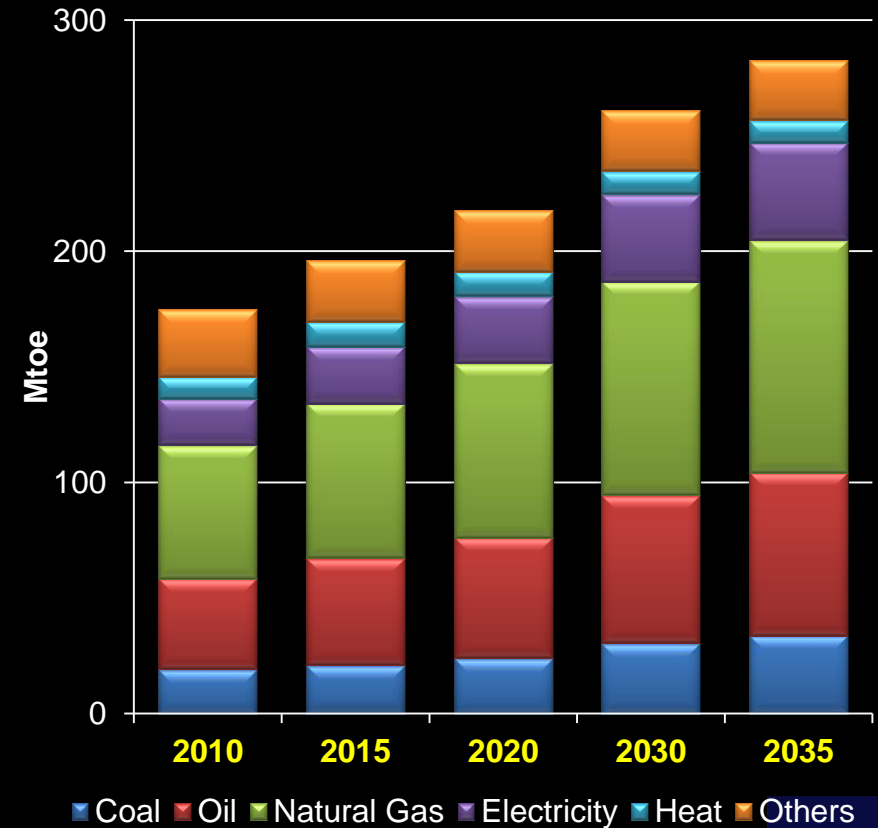


# Final Energy Demand: BAU

## By sector

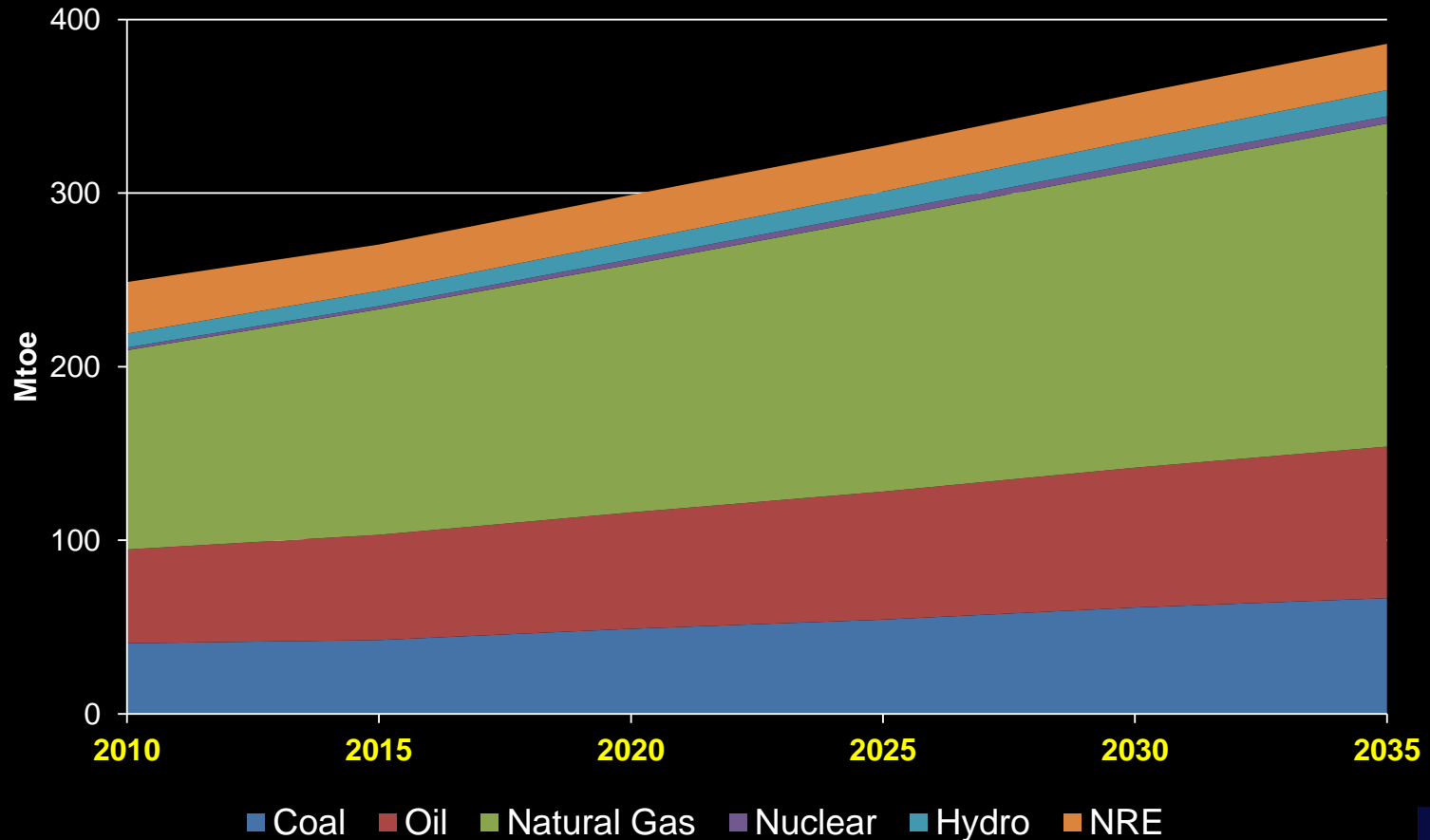


## By energy type

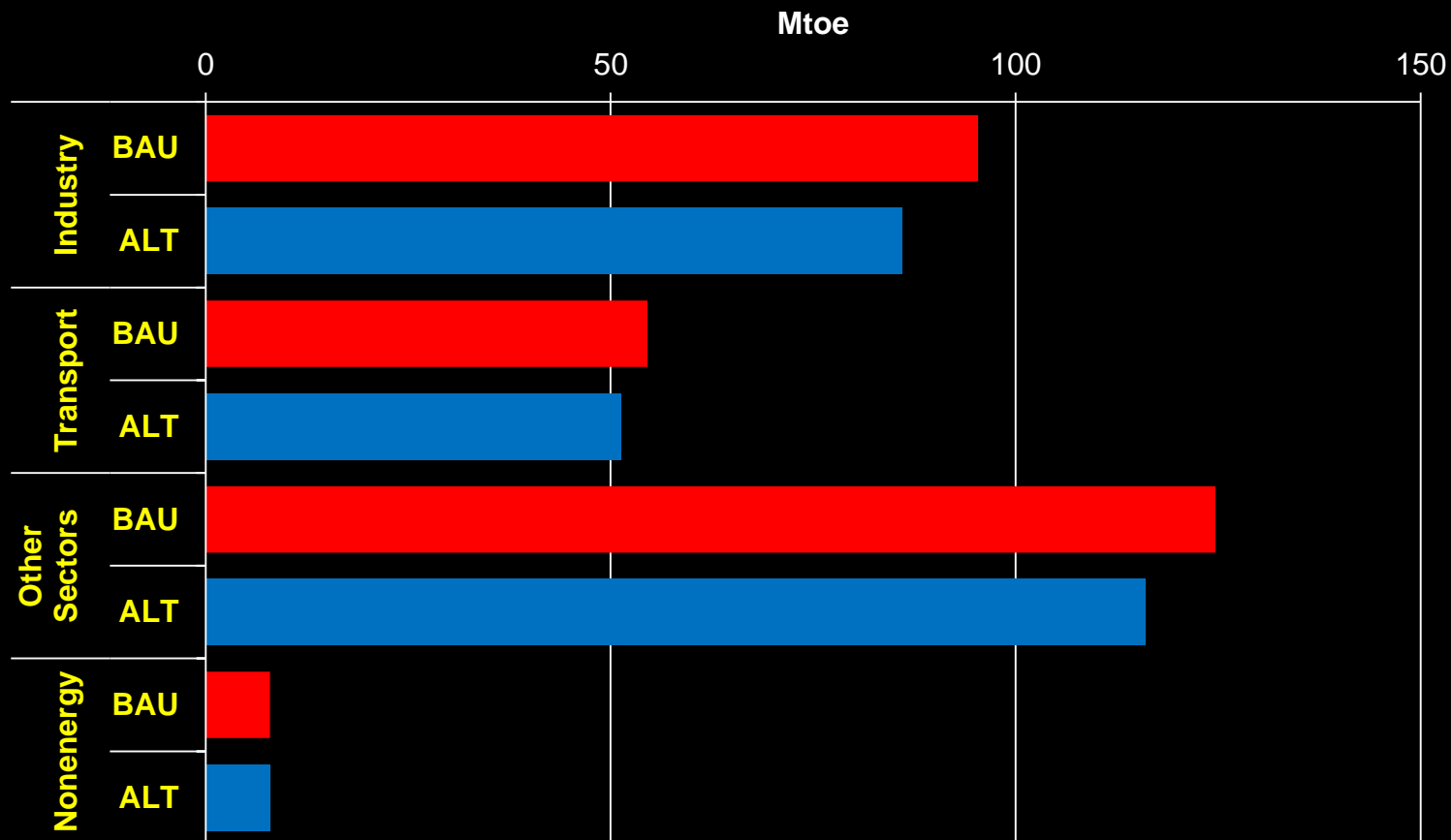


# Primary Energy Demand: BAU

Annual Average Growth Rate: 1.8%



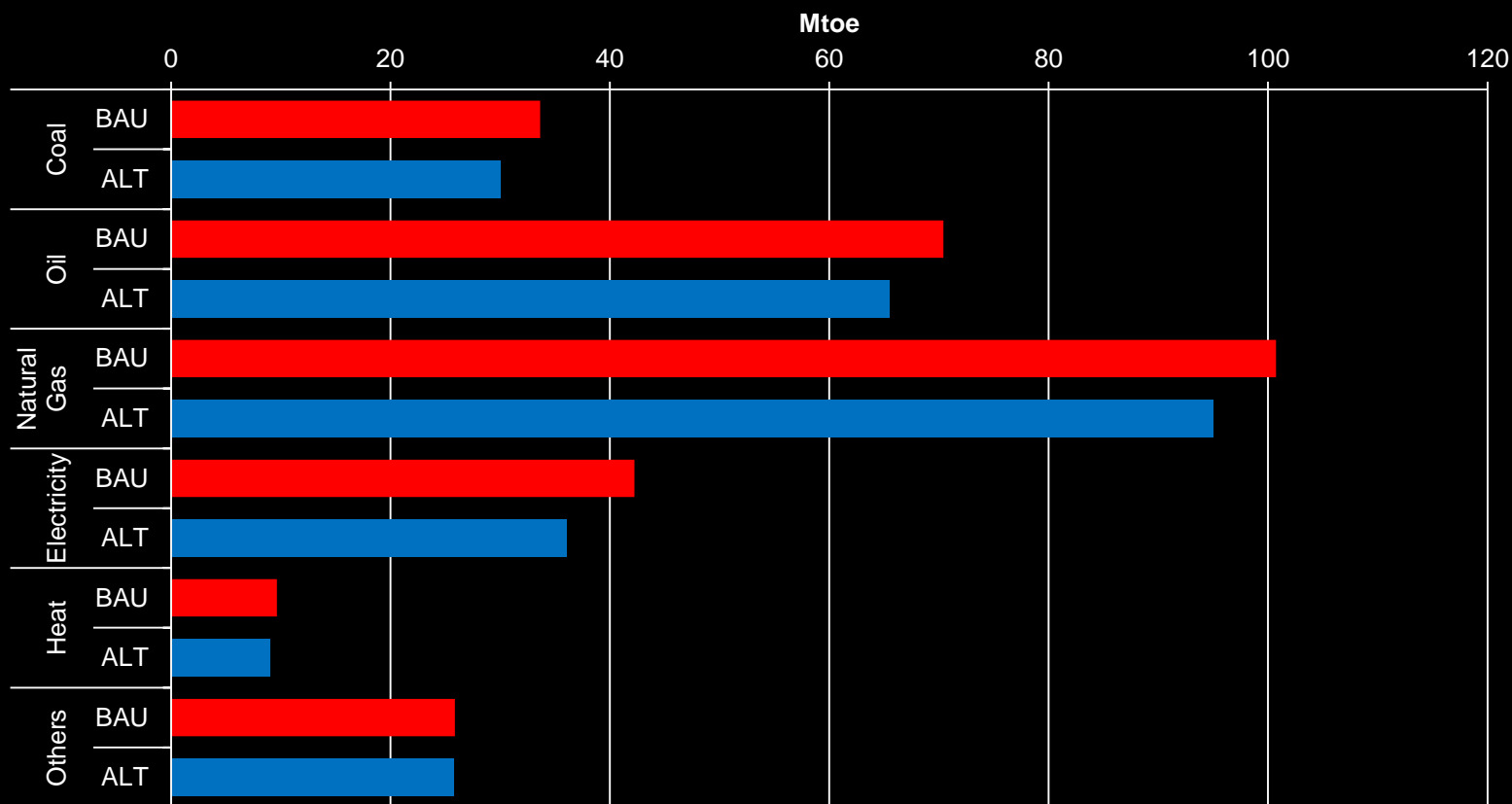
# Final Energy Demand by Sector BAU vs Alternative



	Industry	Transport	Other Sectors	Non-energy use	TOTAL
<b>Energy Savings (Mtoe)</b>	<b>9.4</b>	<b>3.2</b>	<b>8.6</b>	<b>0.0</b>	<b>21.3</b>



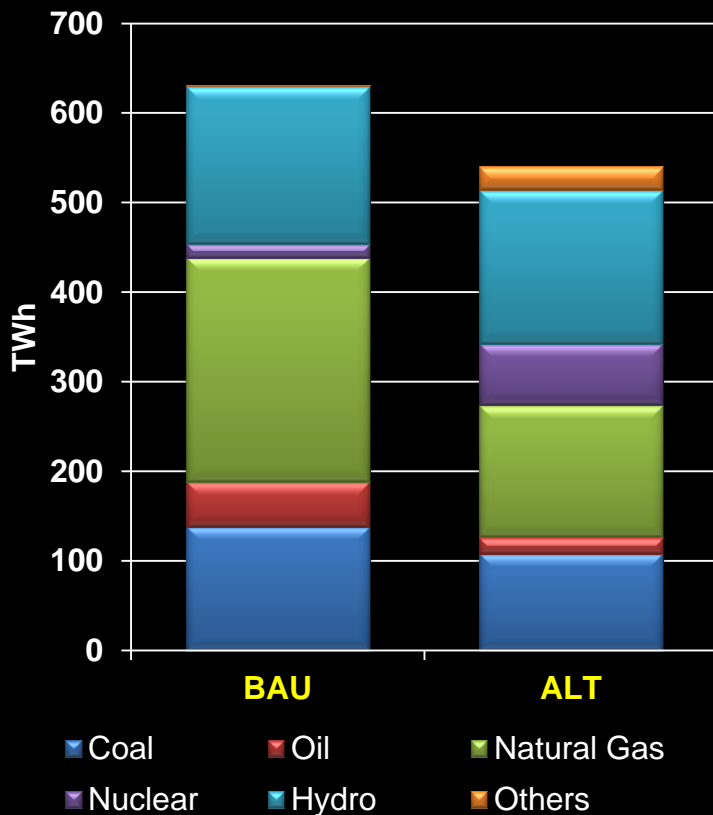
# Final Energy Demand by Type BAU vs Alternative



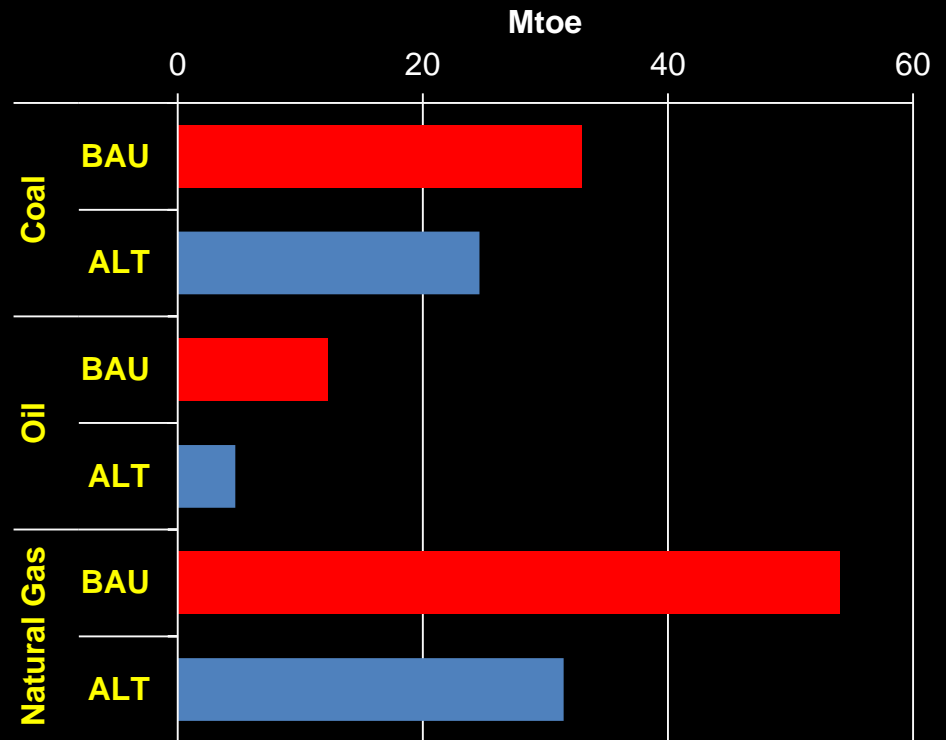
	Coal	Oil	Nat Gas	Electricity	Heat	Others	TOTAL
<b>Energy Savings (Mtoe)</b>	<b>3.7</b>	<b>4.9</b>	<b>5.8</b>	<b>6.2</b>	<b>0.7</b>	<b>0.1</b>	<b>21.3</b>

# Electricity Generation BAU vs Alternative

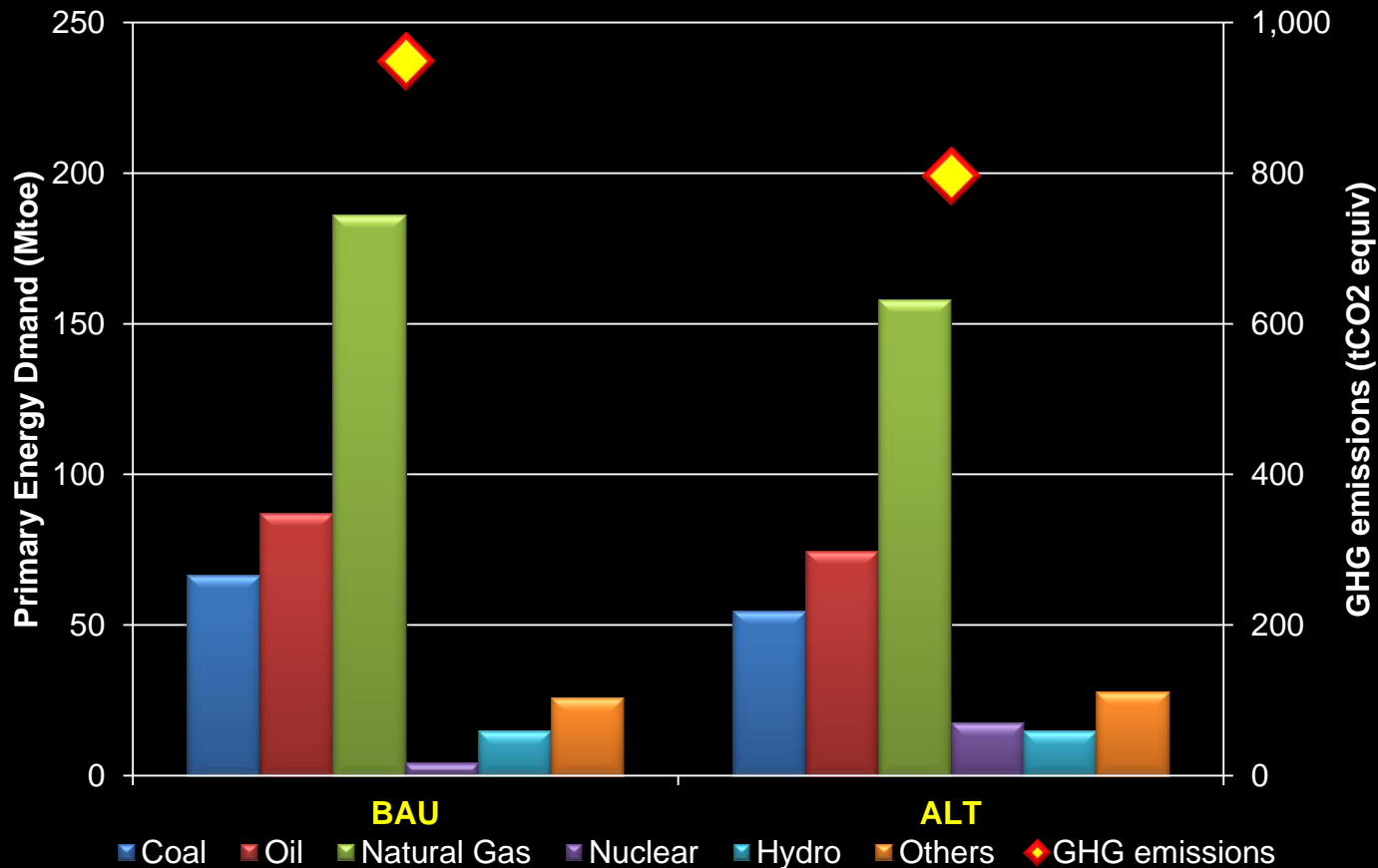
Power Generation Output



Fuel inputs to Power Generation



# Primary Energy Demand by Type and GHG Emissions: BAU vs. Alternative



# Common Issues across Central and West Asia

- Low electrification rates
- Aging energy infrastructure
  - Securing necessary financial resources
- Volatile geo-political conditions/country conflicts
- Need for energy diversification
  - Security of supply
- Low electricity tariffs (do not cover cost of energy production)

# For More Details Please Read the Reports

