ENERGY PERSPECTIVE ON ELECTRIC VEHICLES AND CHARGING STATION

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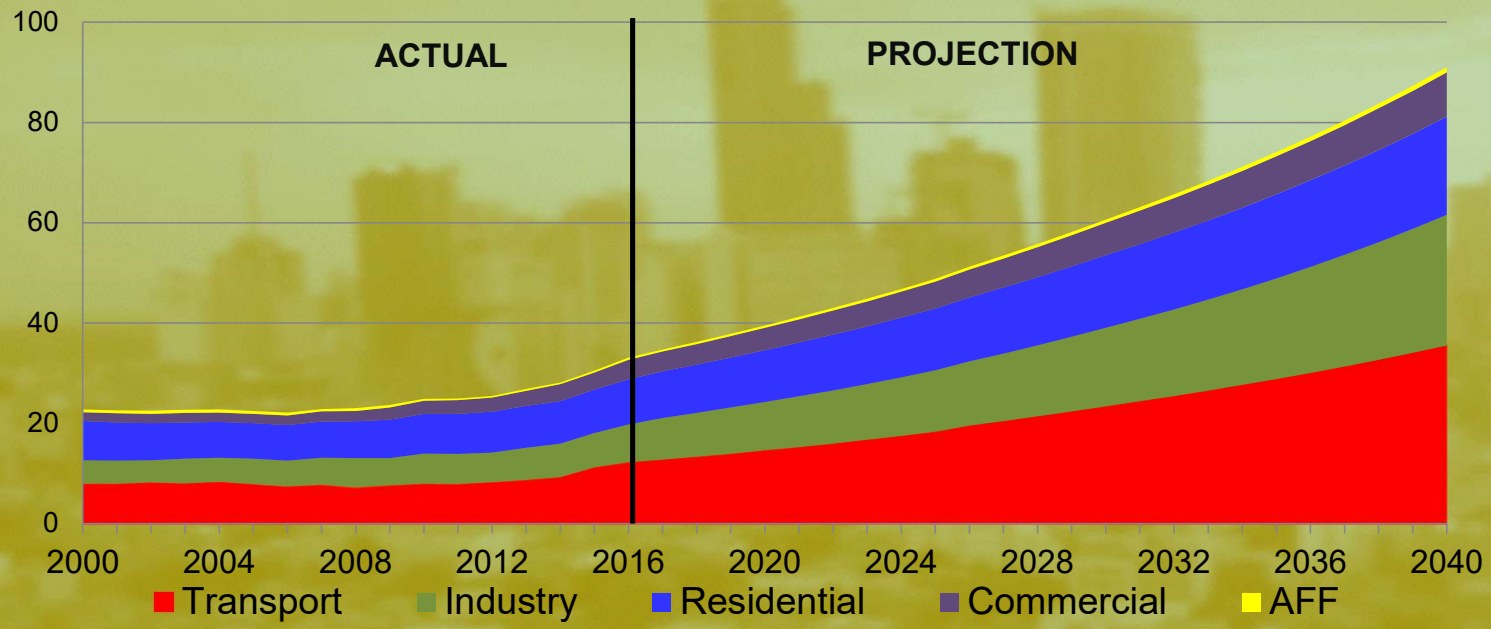
ENERGY UTILIZATION MANAGEMENT BUREAU

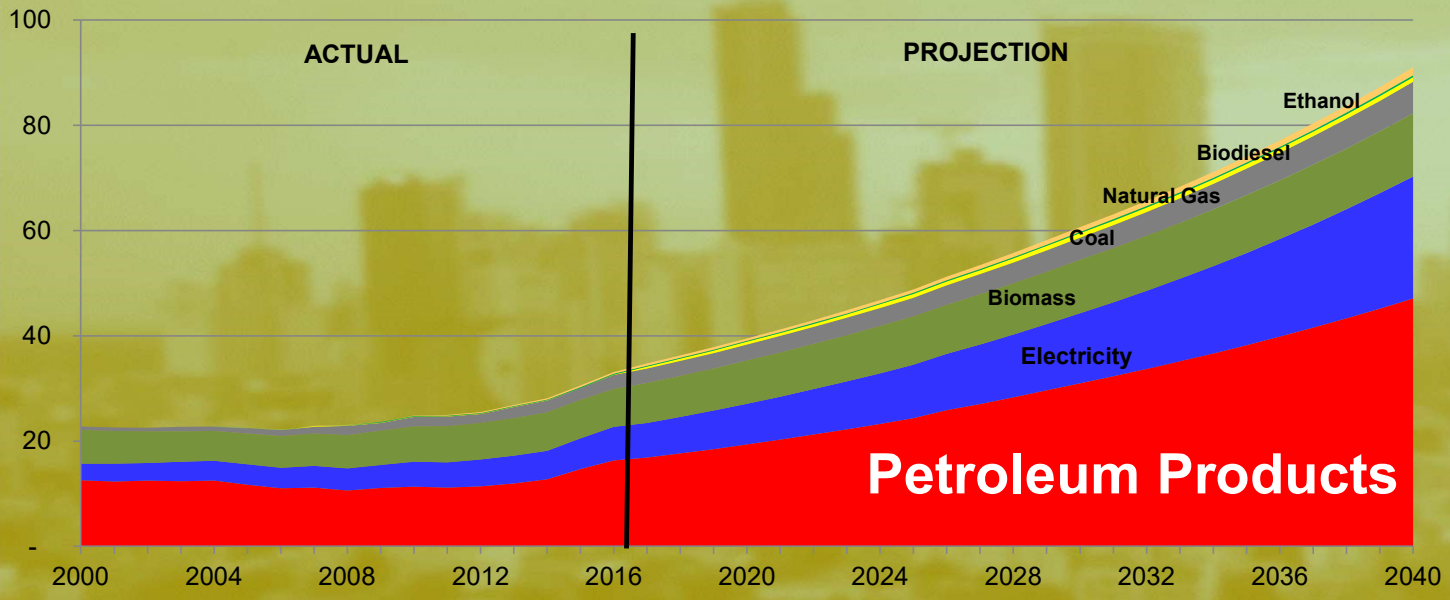
Total Final Energy Demand by Sector: in MTOE



Sector	2016		2030		2040		AAGR (2016-2040)
	MTOE	% Shares	MTOE	% Shares	MTOE	% Shares	
AFF	0.45	1.4	0.67	1.1	1.01	1.1	3.4%
Industry	7.45	22.5	15.61	25.7	26.07	28.6	5.4%
Commercial	3.87	11.7	6.44	10.6	8.82	9.7	3.5%
Residential	9.04	27.3	14.50	23.9	19.57	21.5	3.3%
Transport	12.32	37.2	23.44	38.6	35.53	39.1	4.5%
Total	**33.12**	**100.0**	**60.66**	**100.0**	**90.99**	**100.0**	**4.3%**

Transport sector accounts for largest demand

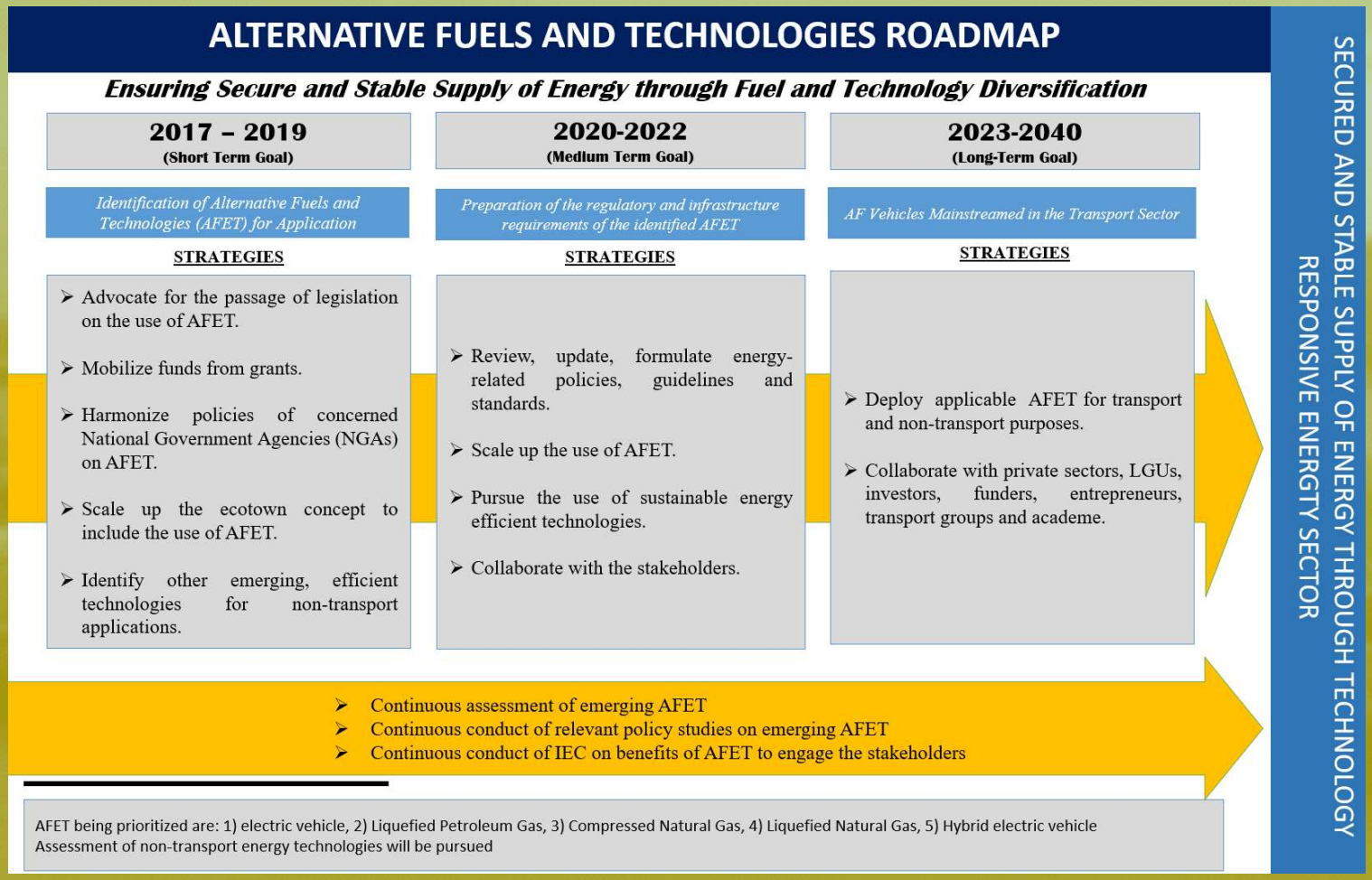
Total Final Energy Demand by Fuel Type: in MTOE



Sector	2016		2030		2040		AAGR
	MTOE	% Shares	MTOE	% Shares	MTOE	% Shares	(2015-2040)
Coal	2.67	8.1	4.24	7.0	6.04	6.6	3.5%
Natural Gas	0.06	0.2	0.84	1.4	0.88	1.0	11.5%
Petroleum Products	16.32	49.3	31.01	51.1	47.11	51.8	4.5%
Biodiesel	0.16	0.5	0.26	0.4	0.36	0.4	3.5%
Ethanol	0.31	0.9	0.87	1.4	1.46	1.6	6.7%
Electricity	6.38	19.3	13.31	21.9	23.18	25.5	5.5%
Biomass	7.21	21.8	10.12	16.7	11.96	13.1	2.1%
Total	**33.12**	**100.0**	**60.66**	**100.0**	**90.99**	**100.0**	**4.3%**

Petroleum Products remain largest fuel type

Alternative Fuels and Energy Technologies Roadmap



Electric Vehicle is prioritized

On-Going Initiatives

- ✓ **Increase public acceptance of Alternative Fuel & Energy Technologies:**
  - Conduct of pilot project/demonstration for introduction of New and Emerging Energy Technologies (NEETs) such as electric vehicles
  - Partnership with private institution/s for promotion and awareness activities
- ✓ **Establishment of enabling mechanisms for the adoption and commercialization of Alternative Fuels and Technologies:**
  - Develop Policy and guidelines that are non-discriminatory
  - Advocate for the passage of Fiscal and non-fiscal incentives
- ✓ **Promotion of Energy Sector Innovation**
- ✓ **Capacity Building for Program/Project Implementers on Alternative Fuels and Emerging Technologies**

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SB 174

ELECTRIC VEHICLES AND CHARGING STATIONS ACT

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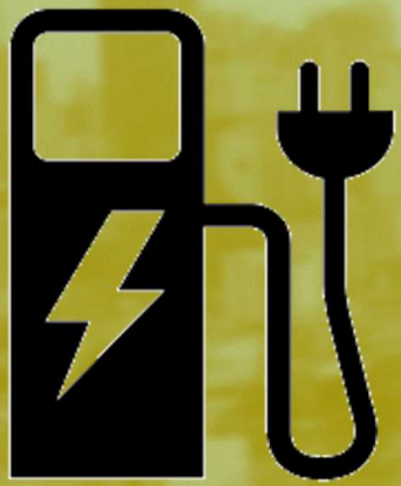
POINTS TO CONSIDER ON THE COST OF OWNERSHIP

ICE Unit + Fuel

POINTS TO CONSIDER ON THE COST OF OWNERSHIP



EV Unit
=
Unit Cost – Battery Cost

EV PRICE BREAKDOWN

35% UNIT COST

65% BATTERY COST

(Covering all component of the battery system including BMS, etc.)

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Proposed incentives are the same with the EE&C Act

Fiscal Incentives

- ✓ VAT
- ✓ Custom Duties

Non-Fiscal Incentives

- ✓ Free parking
- ✓ Exemption to Number Coding
- ✓ 5-year registration

Incentivize Adoption

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THANK YOU!

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