## ENERGY PERSPECTIVE ON ELECTRIC VEHICLES AND CHARGING STATION

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### **Total Final Energy Demand by Sector:** in MTOE

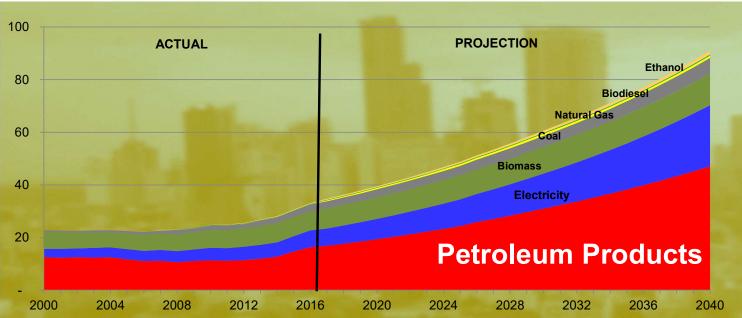
100	ACTUAL	PROJECTION	
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2000 200 Tra		2020 2024 2028 2032 esidential Commercial	2036 2040 AFF

Sector	2016		2030		2040		AAGR	
	MTOE	% Shares	MTOE	% Shares	MTOE	% Shares	(2016-2040)	
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	<mark>37.2</mark>	<mark>23.44</mark>	<mark>38.6</mark>	<mark>35.53</mark>	<mark>39.1</mark>	<mark>4.5%</mark>	
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



### Petroleum Products remain largest fuel type

Sector	2016		2030		2040		AAGR	
Sector	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	<mark>16.32</mark>	<mark>49.3</mark>	<mark>31.01</mark>	<mark>51.1</mark>	<mark>47.11</mark>	<mark>51.8</mark>	<mark>4.5%</mark>	
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%	



### **Alternative Fuels and Energy Technologies Roadmap**

#### ALTERNATIVE FUELS AND TECHNOLOGIES ROADMAP

Ensuring Secure and Stable Supply of Energy through Fuel and Technology Diversification

<b>2017 – 2019</b> (Short Term Goal)	2020-2022 (Medium Term Goal)	<b>2023-2040</b> (Long-Term Goal)
Identification of Alternative Fuels and Technologies (AFET) for Application STRATEGIES	Preparation of the regulatory and infrastructure requirements of the identified AFET STRATEGIES	AF Vehicles Mainstreamed in the Transport Sector STRATEGIES
<ul> <li>Advocate for the passage of legislation on the use of AFET.</li> <li>Mobilize funds from grants.</li> <li>Harmonize policies of concerned National Government Agencies (NGAs) on AFET.</li> <li>Scale up the ecotown concept to include the use of AFET.</li> <li>Identify other emerging, efficient technologies for non-transport applications.</li> </ul>	<ul> <li>Review, update, formulate energy-related policies, guidelines and standards.</li> <li>Scale up the use of AFET.</li> <li>Pursue the use of sustainable energy efficient technologies.</li> <li>Collaborate with the stakeholders.</li> </ul>	<ul> <li>Deploy applicable AFET for transport and non-transport purposes.</li> <li>Collaborate with private sectors, LGUs, investors, funders, entrepreneurs, transport groups and academe.</li> </ul>
> Continu	ious assessment of emerging AFET ious conduct of relevant policy studies on emergi ious conduct of IEC on benefits of AFET to enga	

AFET being prioritized are: 1) electric vehicle, 2) Liquefied Petroleum Gas, 3) Compressed Natural Gas, 4) Liquefied Natural Gas, 5) Hybrid electric vehicle Assessment of non-transport energy technologies will be pursued

Electric Vehicle is prioritized

SECURED AND STABLE SUPPLY OF ENERGY THROUGH TECHNOLOGY

**RESPONSIVE ENERGTY SECTOR** 



#### **On-Going Initiatives**





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 $\checkmark$ 

- 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



## **SB174 ELECTRIC VEHICLES AND CHARGING STATIONS ACT**



POINTS TO CONSIDER ON THE COST OF OWNERSHIP

5

# ICE Unit + Fuel



POINTS TO CONSIDER ON THE COST OF OWNERSHIP

### EV Unit = Unit Cost – Battery Cost



### EV PRICE BREAKDOWN

# UNIT COST

# BATTERY COST

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



### 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

## THANK YOU!





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