PHILIPPINE ELECTRIC VEHICLE INDUSTRY GROWTH AGENDA

PROPOSED ROADMAP 2014 - 2024

Prepared by:
ROMEO VILLADOLID, JR.

For:
ROMMEL T. JUAN
President

PRESENTATION OUTLINE

I. BACKGROUND

- Industry Profile
- Prevailing Conditions:
  - Market Outlook:
    - a. Domestic
    - b. ASEAN/Regional
  - Existing Government Support
  - SWOT Analysis

Presentation Outline

II. OUTLINE: PROPOSED EV ROADMAP

- Roadmap Process
- Roadmap Elements
  - a. Vision
  - b. Mission
  - c. Targets/Projections
  - d. Developmental Timeframe
  - e. Strategies
  - f. Gap Analyses & Measures
  - g. Action Plans
- Recommendations

BACKGROUND

Industry Profile

Electric Vehicle Association of the Philippines

General Information

a. Industry Players (Number of Firms)

E-Vehicle Manufacturers / Importers	(Local)		Foreign (New Investments)	
E-Jeep	6		-	
E-Quad	3		-	
E-Trike	5		3	
E-Bike	2		3	
E-Bus / Trucks	2		2	
E-Car	2	**20**	-	**8**

Parts & Components Manufacturers	11	
Importers, Dealers & Traders, Service Providers	7	**18**

b. Employment (Number of Persons)

Manufacturing Employment	
Electric Vehicle Manufacturing	8,600
Electric Vehicle Parts Manufacturing	5,400
EV Importers, Dealers & Traders, Service Providers	840
	15,840
Auto-Supporting Industries Employment	**42,000**

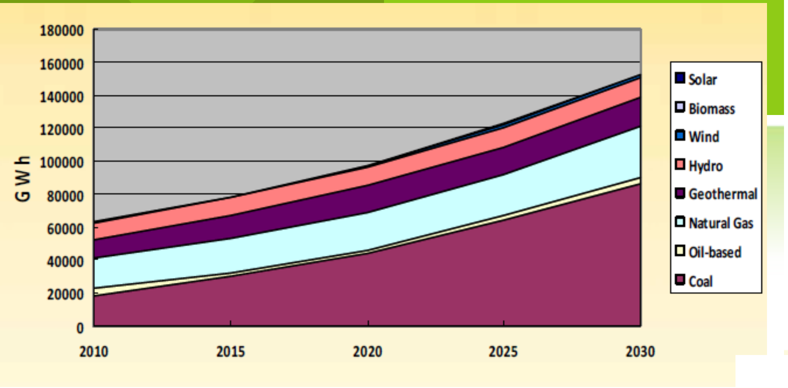
INDUSTRY PROFILE

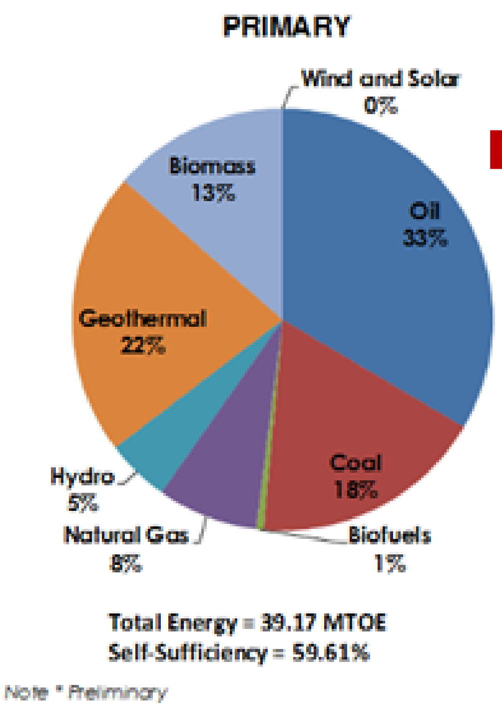
Electric Vehicle Association of the Philippines

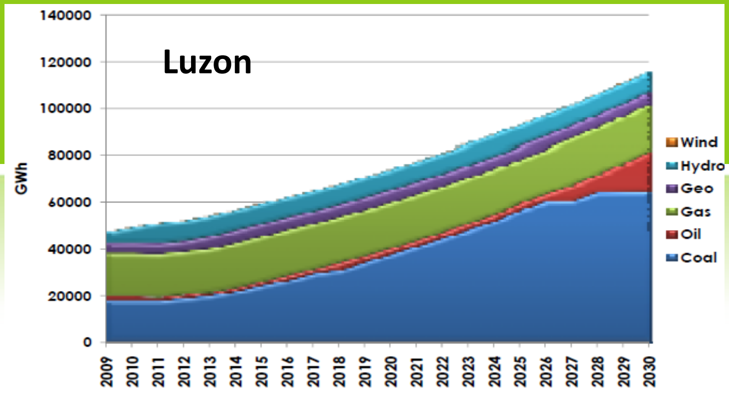
Electric Vehicles, Parts & Components Manufacturers/Importers (Active)	
EVAP members	35
Non- EVAP Members	11
Total:	**46**

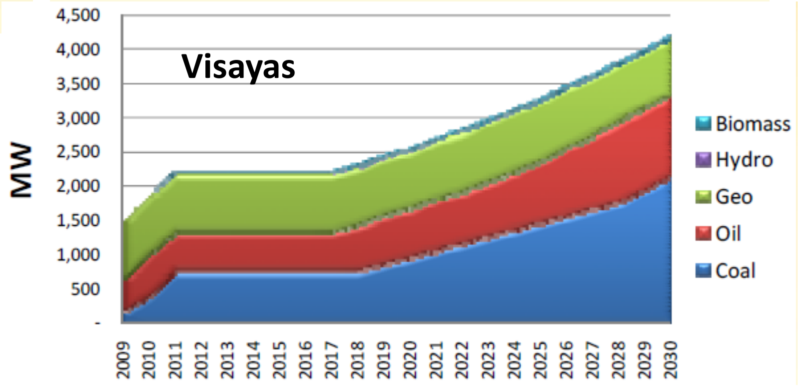
Prevailing Conditions

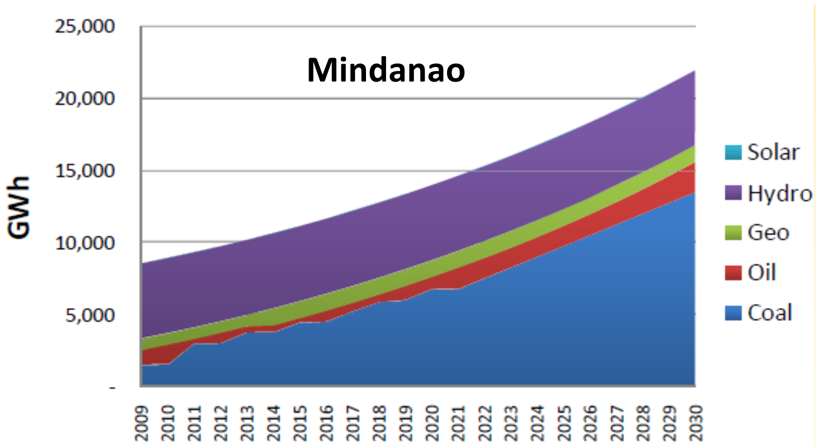
Electric Vehicles and the Environment: Philippines





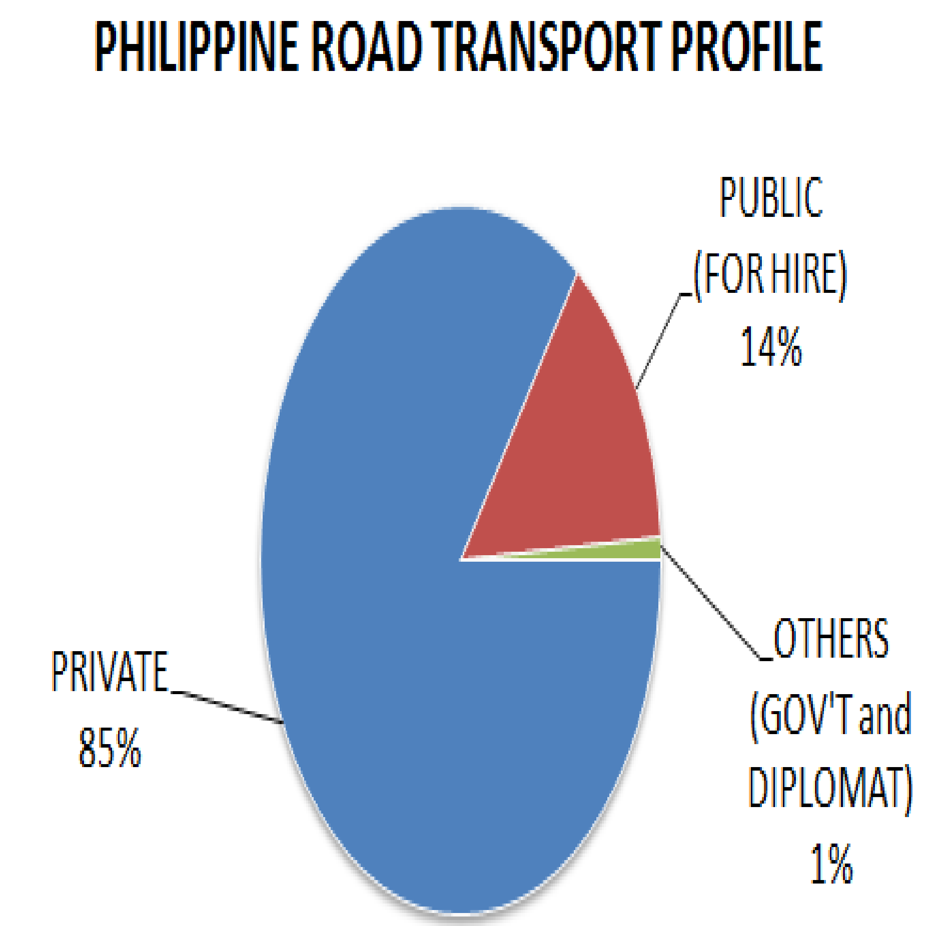






Electric Vehicles and the Environment

Electric Vehicle Association of the Philippines



Total # of motor vehicles in 2010 = **6.63 million**

Public Transport

4.5

5.4

23.3

66.8

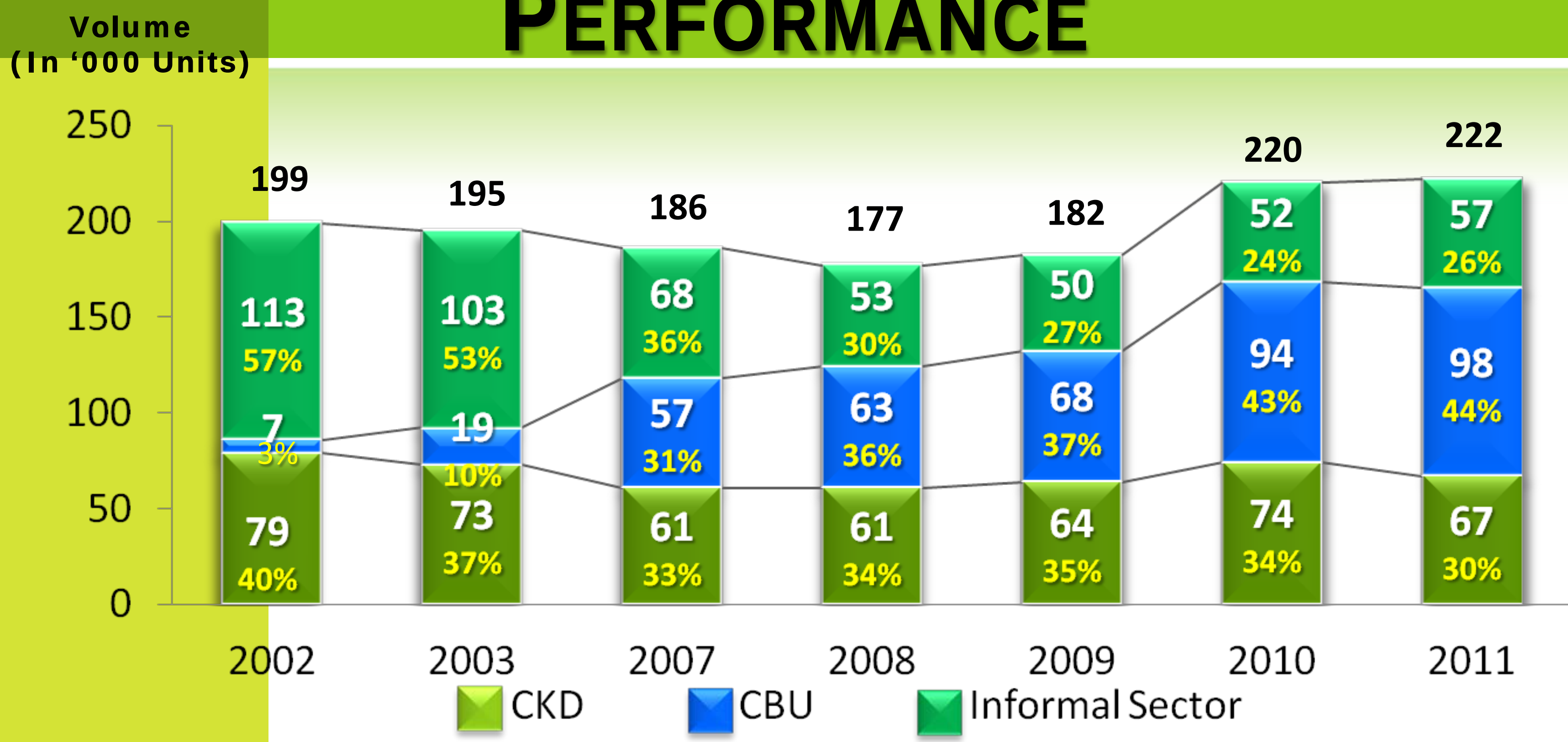
Tricycle & Motorcycle

Utility Vehicle

Cars

Bus, Trucks & trailers

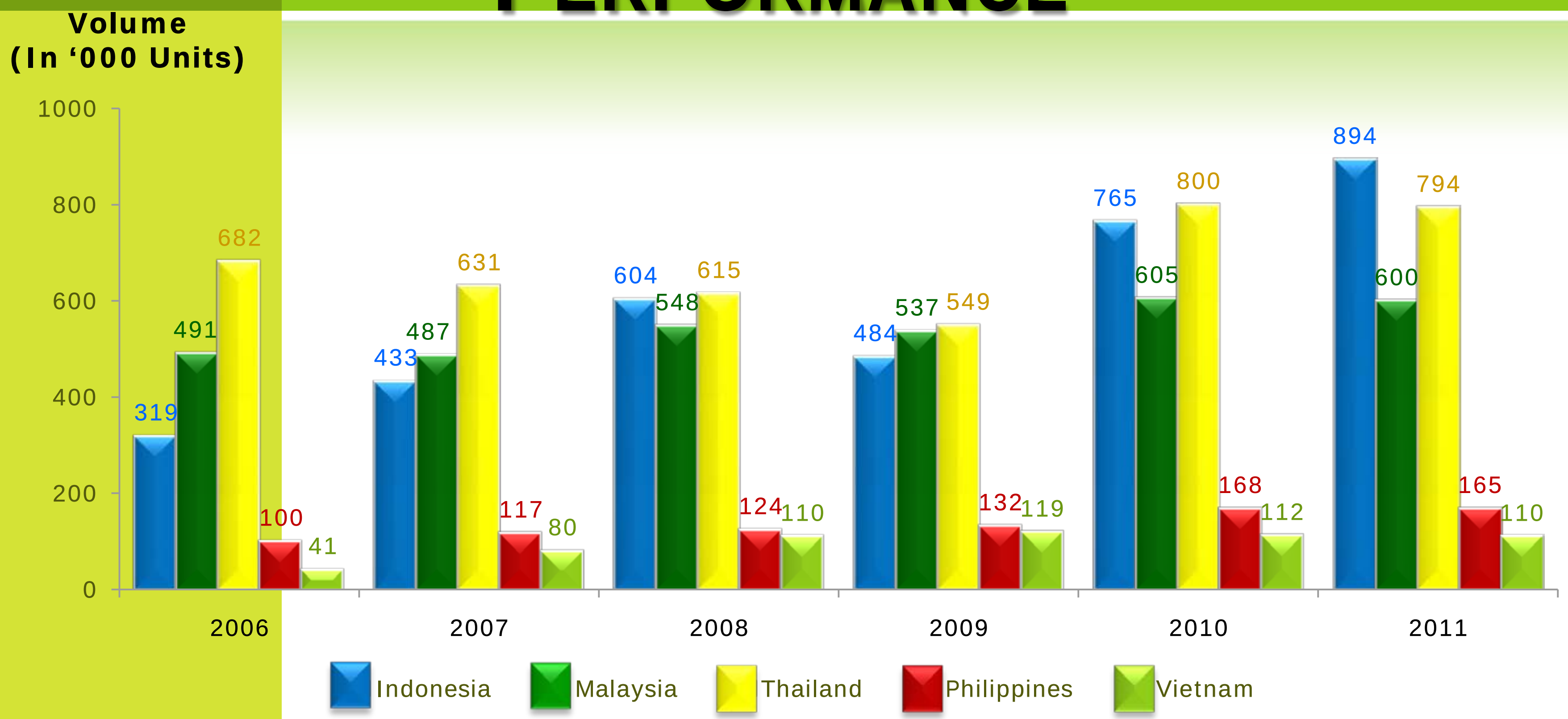
Automotive Industry Domestic Market Performance



- **Growth of the formal market was dominated by CBU imports**
- **Share of informal sector declining due to EO 156, but quantity still substantial**

Source: [1/] LTO New Registration Data

Automotive Industry ASEAN Market Performance



❖ **Small PH domestic market**
- **Slow growth vs. TH, IN and MY**
- **VN is fast catching up on PH**

2011 Market = 2.56M units

IN = 35%	PH = 7%
MY = 23%	VN = 4%
TH = 28%	

EV MARKET OUTLOOK

Philippine Electric Vehicle Industry Domestic Market Projections

Electric Vehicle Association of the Philippines

Manufacturer	Vehicle Type	2014	2015	2016	2017	2018	2019	2020	2021
PhUV	E-Jeep	40	45	50	55	60	65	70	80
	EQuads/ Village Service Vehicle	20	25	30	35	40	45	50	55
	Electric Tricycle	900	990	1091	1200	1320	1452	1597	1758
ADB / DOE 5 to 6 Major Companies	E-Trikes	20,000	20,000	20,000	20,000	20,000			
Terra Motors Corp of Japan	E-Scooter E-Motorcycle E-Trike	10,000	15,000	20,000	25,000	30,000			
Innovatronix	Commercial EV	2,000	4,000	6,000	8,000	10,000			
LS Group Partnership with MERALCO	Smart Grid Integrated Technologies & Power Distribution	Projected Monthly Sales on Services is good for 35k to 45k units annually of EV (equivalent to approx. Php 1.68 Billion annually)							

Philippine Electric Vehicle Industry Domestic Market Projections

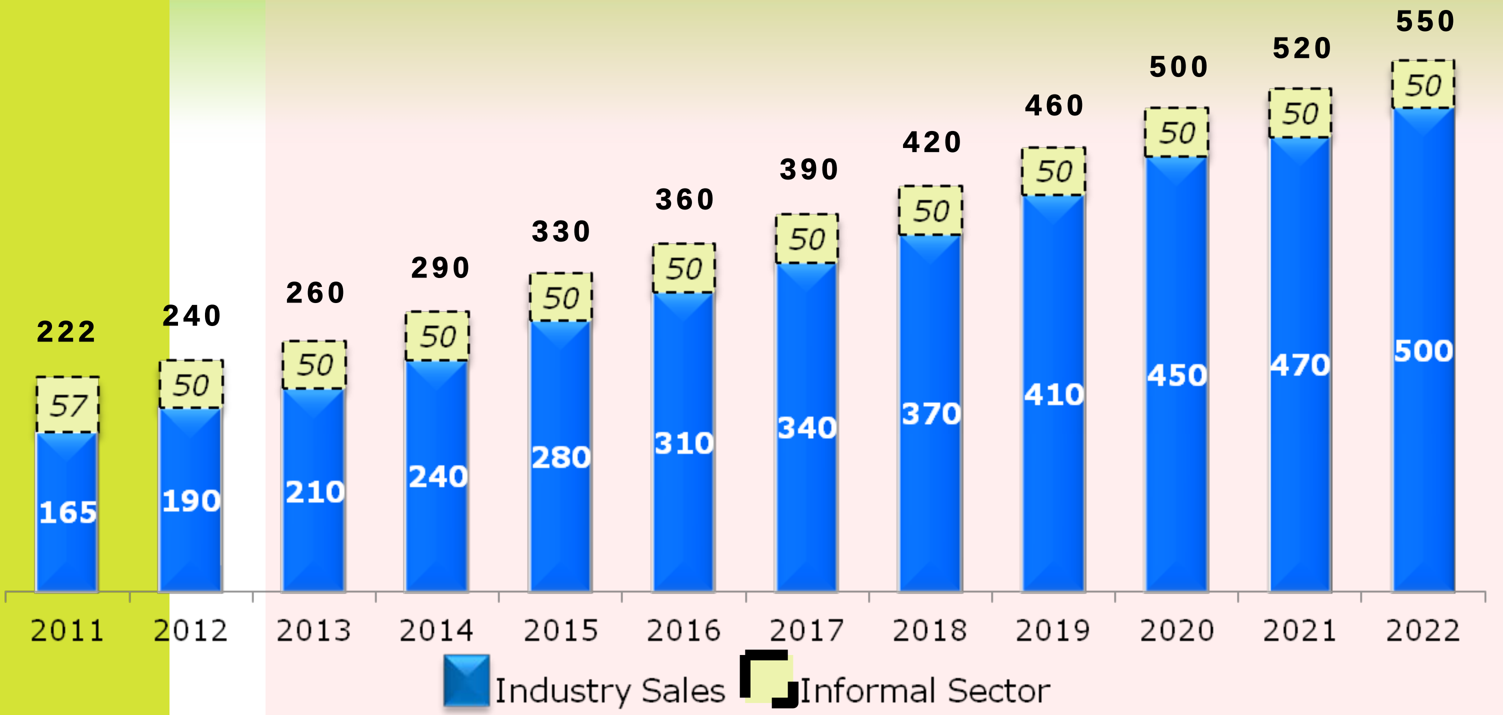
Electric Vehicle Association of the Philippines

Manufacturer	Vehicle Type	2014	2015	2016	2017	2018	2019	2020	2021
ES Group / SNT Group Korea	Commercial EV E-Quad E-Trike E-Bicycle E-Bus / Truck	160	180	200	220	245			
TECO Group Taiwan		10,000 6,000	10,000 6,600	10,000 7,300	10,000 8,000	10,000 8,800			
Moving Ecology Japan		(12-15 units per year at an annual growth rate of 8-12%)							

SOURCE: *(Various published information for purposes of estimates only)*

Domestic Automotive Market Projection

Electric Vehicle Association of the Philippines



- **PH is next automotive market growth area**
  - ***Motorization is expected to begin in 2014***
  - ***→ potential to reach more than 500K units by 2022***

ASEAN Automotive Market Projection

Electric Vehicle Association of the Philippines

ASEAN Market Size

2004	2010	2015-2020
1.7 Million Vehicles	2.5 Million Vehicles	3 -6 Million Vehicles

Thailand's Snapshot

GDP per capita : US$2,603
Population : 62 Million

Domestic Sales : 626K units
Production : 923K units

ASEAN Market Share **37%**

Indonesia's Snapshot

GDP per capita : US$2,980
Population : 238 Million

Domestic Sales : 764K units
Production : 702K units

ASEAN Market Share **31%**

ASEAN will be 8th largest auto market by 2015

3rd wave?

Motorization in ASEAN

TH and IN captured 1st and 2nd wave of high motorization growth in the region

*Source: M. Sugata presentation (May 2012)

EXISTING GOVERNMENT SUPPORT

Existing Policies & Regulations

- ***Registration of EVs***
  - *AO AHS-2008-014 Guidelines in the Registration of Low Speed Vehicles (LSV)*
  - *AO 2006-01 Guidelines in the Registration of Light Electric Vehicles (LEV)*

- ***Philippine National Standards for EVs***
  - ***Six** (6) ISO standards for 4-wheeled EVs*
  - *Safety standards for 3-wheeled EVs*

Existing Incentives

- ***Omnibus Investments Code (Executive Order 226)***
  - *2011 IPP provides ITH for manufacture/assembly of motor vehicles such as EVs, parts/components and establishment of charging stations*
- ***Executive Order 488***
  - *Modifying the Rates of Import Duty on Components, Parts and Accessories for the Assembly of Hybrid, Electric, Flexi-Fuel and CNG Motor Vehicles . . to ZERO rate*

Fiscal incentives

Regime	BOI-OIC	PEZA	Clark, Subic
Income	4-8 years ITH	4-8 years ITH	No ITH
Others	After ITH, corporate tax rate of 30%	After ITH, 5% tax on gross income	5% tax on gross income
Imports of raw material/ supplies	Tax credit	Tax & duty exemption	Tax & duty exemption
Breeding stocks & genetic materials	Tax exemption within 10 years	Tax & duty exemption	Tax & duty exemption
Imported capital equipment, spare parts, materials	Duty exemption on spare parts & capital equipment	Tax & duty exemption	Tax & duty exemption
Additional deduction training expenses		✓	
Employment of foreign nationals	✓	✓	✓
Additional deduction for labor expense	✓		

Fiscal incentives: BOI IPP

Electric Vehicle Association of the Philippines

Preferred area	Motor vehicle assembly including alternative fuel vehicles or AFVs (hybrid, electric, flexible-fuel) & manufacture of parts & components; manufacture of new 3 or 4-wheel Philippine utility vehicles for cargos & passengers
Pioneer status	Engines & transmissions; tool & die to produce chassis & engine; common facility for heat treatment, forging, stamping of motor vehicle parts & components; electric motors, batteries other than lead acid batteries, controller assembly & battery charger for EVs

- Investors (foreign & domestic) may avail of incentives if they invest in preferred areas identified yearly in IPP
- If not listed, they may be entitled to incentives if at least 50% of output is exported if Filipino-owned or at least 70% if foreign-owned
- Pioneer: 6 years ITH; Non-pioneer: 4 years; Expansion: 3 years
- Auto Export Program: Ford (now closed)

SWOT Analysis

SWOT Analysis: Electric Vehicle

Electric Vehicle Association of the Philippines

Strengths

- Emerging industry to give essential advantages such as:
  - Savings on costly oil imports
  - Reduction in pollution (smoke-emission free)
  - Ensuring answer to global warming threats
- Green Option taking the lead by 2017
- Ushering new and innovative technologies
  - Regenerative braking system
  - No oil, transmission fluids, filters and belts
- Transformational gains for the local industry is lucrative
  - Immediate big investments are coming in to start the EV industry

DOE

Electric Vehicles

- **Technological Benefits:**
  - has few moving parts
  - charging can be done overnight when electricity demand is low
  - cheaper fuel cost, running cost and maintenance cost

- **Environmental Benefits:**
  - No tail pipe emission
  - Less NOISE which enhances comfort

- **Economic benefits in the long term**
  - E-Trikes : P 150,000 to 250,000
  - E-Jeeps : P 600,000 to 700,000
  - E-Bus : P 8.0 Million

SWOT Analysis: Automotive Vehicle

Electric Vehicle Association of the Philippines

Strengths

1. Manufacturing presence of global automotive brands
2. With existing production capacity → 170K units
3. Proven manufacturing quality at par with regional/global standards
4. Abundant supply of highly-skilled and technical manpower in the automotive industry
5. Stable automotive parts and components exports

Strengths: Auto Parts & Components

Electric Vehicle Association of the Philippines

Strengths

- Agglomeration in Calabarzon
- Serving 16 automakers
- Parts & components: 5% of total mfg employment & 2.6% of value added
- Net exporter: Exports $3.8B (7% of total)
- Skilled labor
- Strong comparative advantage: ignition sets, radio receivers, external power, lead-acid electric accumulators, brake system, transmissions, air filters for engines, tires, motor vehicle parts

- Take advantage of skilled labor & further develop & promote our areas of comparative advantage such as:
  - ✓ wiring harness
  - ✓ propellers & shafts
  - ✓ transmissions
  - ✓ tires
  - ✓ auto electrical

SWOT Analysis: Electric Vehicle

Electric Vehicle Association of the Philippines

Weaknesses/Limitations

- Technological failures
  - Need to develop battery technology for EV to become sustainable
  - Lack of available rapid charging technology
- Safety Issues
- Lack of Standards and Regulations
- Limited manufacturing capability
- Limited driving range (short distances only)

SWOT Analysis
Automotive Vehicle

Electric Vehicle Association of the Philippines

Weaknesses/Limitations

1. Lack of critical economies of scale
   - *High manufacturing costs*
   - *Small local parts supply base*
   - *Lack of diversification in vehicle models*
2. Parts manufacturing capability gaps
3. Small domestic market base for locally-produced vehicles
4. Limited export product portfolio
5. Inability of government to match the incentives and subsidies given by governments in other economies

Weaknesses: Auto Parts and Components

Electric Vehicle Association of the Philippines

Weaknesses

- Lack of economies of scale: assemblers operating below optimum size of production; small size of domestic market exacerbated by entry of used vehicles
- High cost of production
- Limited supplier base: 256 suppliers; Thailand 2,289 suppliers
- SME parts makers: lack of access to finance, technology & difficulties in sourcing inputs
- Limited linkages within industry
- Local value-added 15-20%; Thailand 80-90%
- Low productivity
- Lack of R&D
- Lack of investment in state of the art technology
- Labor market policy
- High power & logistics costs
- Uncertainty in government policy
- Trade facilitation issues: customs
- Weak Infrastructure

Limited suppliers + **Heavy dependence on imports** + **Small scale production** = **Weak competi-tiveness**

SWOT Analysis: Electric Vehicle

Electric Vehicle Association of the Philippines

Opportunities

- ❖ Major foreign companies in EV manufacturing looking for partners in the PH.
- ❖ PH aims to be a regional manufacturing hub for Philippine EV
- ❖ Boost PH Tourism potential
- ❖ Results to sufficiency in present transportation system
- ❖ Results to creation of Solar-Powered charging stations nationwide
- ❖ US$ 500M E-Trike program bringing Php 20B to industry
  - Major EV partners will set shops
  - Save 561T barrels of imported oil
  - Reduction of 260T tons of CO2 per year
- ❖ US auto industry to produce 1M EVs by 2015

SWOT Analysis: Automotive Vehicle

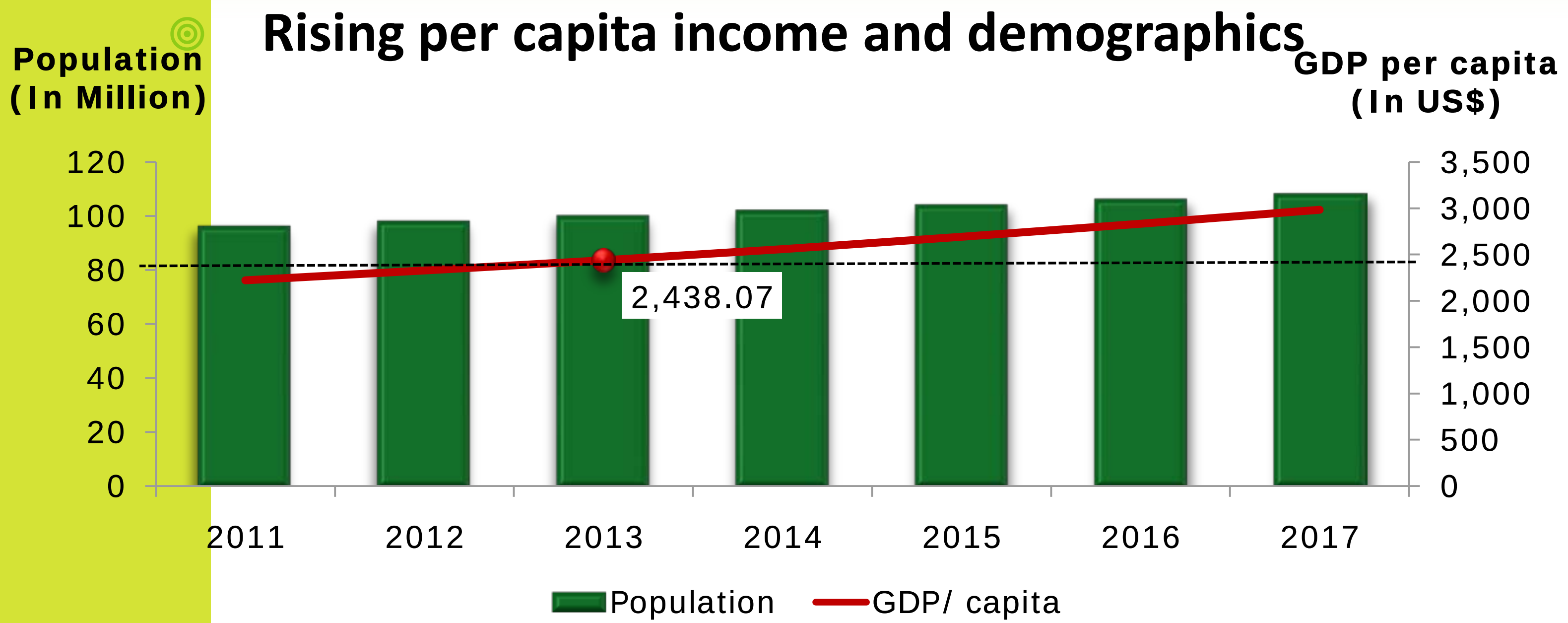
Electric Vehicle Association of the Philippines

Opportunities

1. Rising per capita income and demographics
2. Accelerated infrastructure development
3. Latent domestic market/ageing vehicle fleet
4. Increasing trend towards environment-friendly/ green vehicles
5. ASEAN economic integration
6. Harmonization of standards and technical regulations
7. Relocation of parts and components manufacturers from developed economies

OPPORTUNITIES

Electric Vehicle Association of the Philippines



- ❖ **GDP per capita may exceed US$ 2,500 by 2014**
  - **High motorization rates will follow**

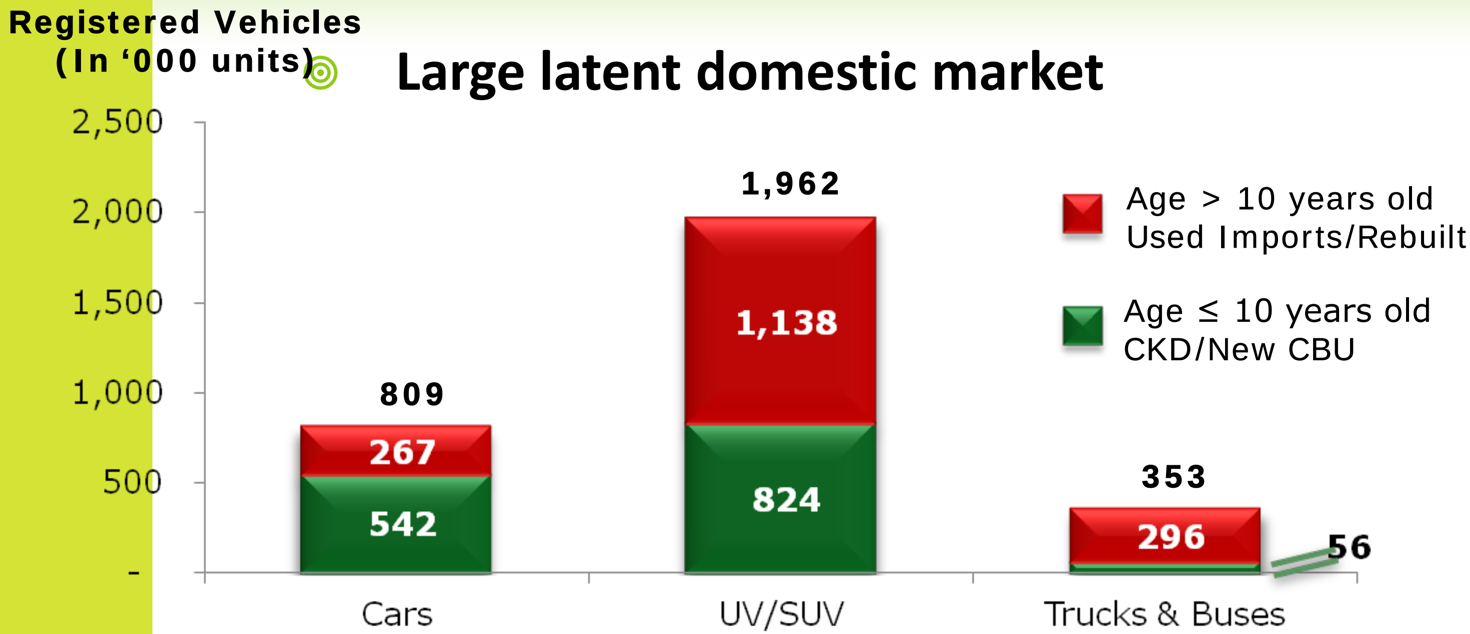
TH & IN Experience

TH (2004) → @US$2,600 GDP/capita – 625K units

IN (2010) → @US$2,794 GDP/capita – 764K units

OPPORTUNITIES
4-WHEELED VEHICLES

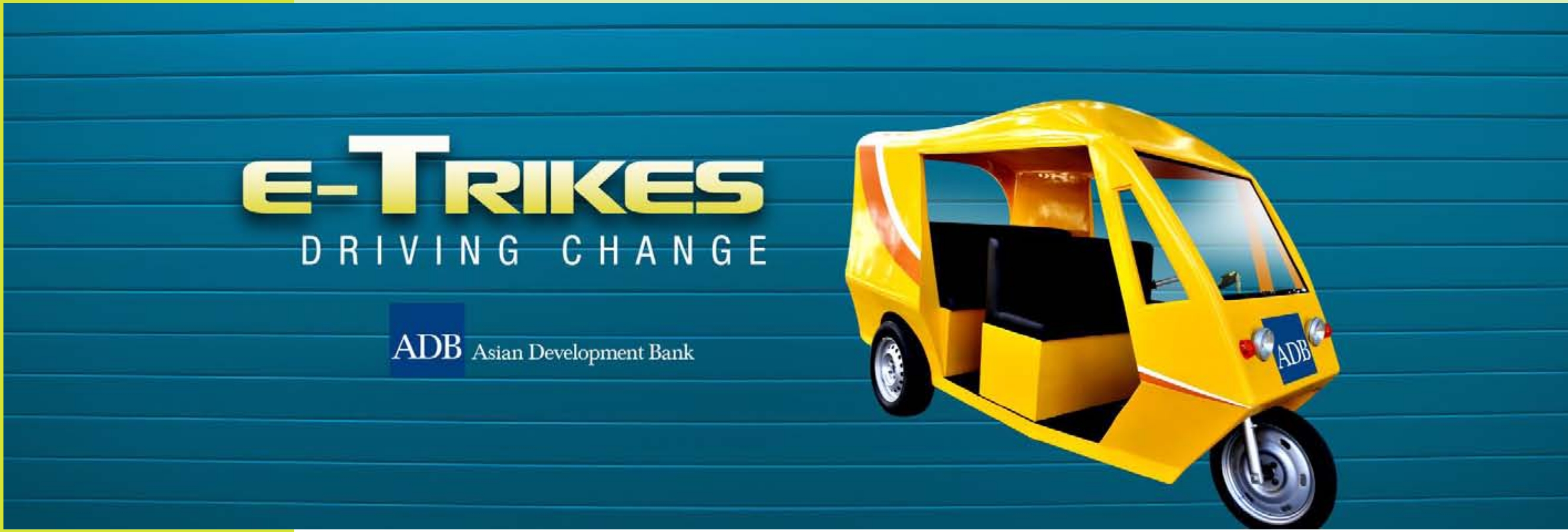
Large latent domestic market



- Untapped market potential → ageing vehicle fleet
  - Estimated fleet size for upgrading = **1.7 Million units**

*Note: Data are as of end 2010

ELECTRIC TRICYCLE PROGRAM



$504 Million

Opportunities: ADB/DOE E-Trike Project

OBJECTIVES:

- Reduce transport sector's annual fuel consumption by 2.8% (*based on 20 Million Barrels per year consumption in 2010*) or an equivalent of 89.2 Million Liters of gasoline per year.

- Achieve 79% emission avoidance by shifting to 100,000 tricycles running on pure electricity. Estimated 259,008 tons of avoided carbon dioxide (CO2) emissions per year.

OPPORTUNITIES: ADB/DOE E-TRIKE PROJECT

Five-year implementation (2014-2018)

Phase I (2014-2015)

Cities and Municipalities	Number of E-Trikes
Metro Manila	12,500
Quezon City	7,000
Caloocan City	1,500
Makati City	1,100
City of Manila	1,000
Parañaque City	1,000
Mandaluyong City	900
Puerto Princesa City, Palawan	1,500
Cabanatuan City	1,500
Lipa City	2,000
Tarlac	1,000
Dagupan City	1,000
Davao City	500
TOTAL	**20,000**

OPPORTUNITIES: ADB/DOE E-TRIKE PROJECT

IMPLEMENTATION PLAN

- Phase II (2016-2018)

Cities and Municipalities	Indicative Number of E-Trikes
Metro Manila	27,000
Quezon City	15,000
Caloocan City	5,500
Makati City	1,500
City of Manila	1,500
Parañaque City	2,000
Mandaluyong City	1,500
Cabanatuan City	22,500
Antipolo City	10,000
Puerto Princesa City, Palawan	2,500
Tarlac City	9,000
Lipa City	3,000
Los Baños	2,500
Dagupan City	1,500
Davao City	1,500
Malay, Aklan (Boracay)	500
TOTAL	**80,000**

eTrike Business Flow

Body molding

Body painting

Chassis assembly

Motor supply

eTrike assembly

Battery assembly

Charger supply

Charging station

Opportunities: Auto Parts & Components

Electric Vehicle Association of the Philippines

Opportunities

- AEC 2015, ASEAN+1: increased trade & investment opportunities
- Emergence of international & regional production networks: FDI, technology, greater access to larger markets through exports
- 3rd wave of motorization in ASEAN expected to occur in 2015
- Import replacement & export potentials in alternative fuel vehicles, hybrid, electric vehicles & modular assembly
- Meager prospects for growth in Japan's domestic economy, rising prospects for Japanese manufacturers to expand abroad
- Calamities in Japan & Bangkok : investors looking for alternative locations
- Strong yen; rising costs in China, restrictive policies on foreign investors
- Growing middle class & remittances at $20B annually
- Population: 93.3 million
- Motorization starting to rise: completion of major road projects
- Political & economic stability
- Strong business & consumer confidence

- **Increasing oil prices & environmental & safety concerns, opportunity areas in AFVs (LPG, CNG) & electric vehicles, global trend toward electrification**
  - **Need to evaluate our existing advantages & identify gaps as well as our competitive position (body is localized)**

SWOT Analysis: Electric Vehicle

Electric Vehicle Association of the Philippines

Threats

- ❖ Restrictive social acceptance
- ❖ Crucial market transformation with greater need to stage education campaign and training on maintenance requirements
- ❖ Lag of technological advancement in the local scene.

SWOT Analysis: Automotive Vehicles

Threats

1. Entry of "Zero Duty" competitive priced CBU/parts imports from FTA partner economies
2. Intense regional competition for investments in manufacturing
3. Entry of new/used low-priced and undervalued vehicles that do not conform to standards on safety and roadworthiness

THREATS

Electric Vehicle Association of the Philippines

	2010	2011	2012	2016	2018
ASEAN – 6	0% All CBUs	Continuing tariff liberalization			
Australia / New Zealand (AANZFTA)	0% PC >3L		0% All CBUs		
Japan (JPEPA)	0% PC >3L	0% All other CBUs except PC 3L & below[1/]			
Korea (AKFTA)			20% All CBUs	5% All CBUs	
China (ACFTA)			20% All CBUs [2/]		5% All CBUs [2/]

[1/]Current JPEPA rate at 20% with no end date. Subject to further negotiations.

[2/] Except PC over 1.5L to 3L 30%.

Threats: Auto Parts & Components

Electric Vehicle Association of the Philippines

Threats

- Competition has become tougher, countries compete not only with one another but also subsidiaries within the same network compete for important roles
- Smuggling of used vehicles: erodes already limited domestic market
- Slowdown in the US & Europe
- High oil prices might limit expansion

Market size

Demand characteristics

Supplier base

Assembler network presence

Competitiveness

Government

Human resources

Transportation & Infrastructure

Scale economies

- Auto company’s decision on where to locate which model or part will depend on competitiveness
- Competitiveness: market size, demand characteristics, existing supplier base, assembler network presence, human resources, government policies (& stability), transportation & logistics cost, economies of scale

Proposed Electric Vehicle Industry Roadmap Outline

Roadmap Elements

VISION

Electric Vehicle Association of the Philippines

The Philippine Electric Vehicle Industry envisions a nation wherein the use of electric vehicles is highly promoted, encouraged & supported by its government & the society in order to develop a transportation landscape that is one with the environment, ecologically & economically.

Mission

- **To educate the public on environmental awareness and the economic & ecological benefits of electric vehicles through the conduct of and/or participation in promotional activities**
- **To accelerate the society's conversion from using gas-powered vehicles to electric vehicles**
- **To partner with the government in the creation & implementation of legislations that will support & encourage the use of electric vehicles.**

Road Map Process

Electric Vehicle Association of the Philippines

2014	Program Development and Approval	• Formulation of EV development program: a) Charting of implementing rules and regulations b) Creation of Incentives program suited to developmental objectives c) Passing and approval of Executive Order • Program Implementation/Registration and Monitoring
2015 to 2016 (3rd wave)	Local Market Build-up / Production Capacity Enhancement	• Domestic market buildup: critical support from government • Incentive program to strengthen the auto parts industry • Intensive investment promotion to attract both foreign & domestic investment flows to the sector, particularly in those critical parts inputs and support activities that are currently missing, as well as new & export activities

Road Map Process

2017 to 2019	Local & Export Markets Expansion	• Adjustment of the sector as it increases its output and manufactures EVs and more vital parts & components for both domestic & export • Labor capacity building; skills & capital accumulation as investment in critical parts & components takes place to enable the industry to take advantage of the opportunities arising from a larger market
2020 to 2024	Full Integration of EV w/ Auto Industry – Local and Regional	• Full integration of the automotive industry with the region's production networks enabling it to take advantage of the opportunities in the medium to long-term • Complementation between EV industry, Automotive Industry and all related industries i.e. electronics etc. • Resources Integration for established Regional and Global Networks

DEVELOPMENTAL TIMEFRAME

Electric Vehicle Association of the Philippines

The Philippine Electric Vehicle Industry: Growth Phases of Development

EV Program Development Launching and Approval / Technology Upgrading

PHASE 1
(2014)
1 year

Local Market Build-up / Production Capacity Enhancement

PHASE 2
(2015-2016)
2 years

Market Expansion, Local and Export / Local Integration

PHASE 3
(2017-2019)
2 years

Full Integration Regional and Global / Technological Advancement Full Market Size up

PHASE 4
(2020-2024)
5 years

Targets

Electric Vehicle Association of the Philippines

2014

Domestic EV Sales to **Php 214.2 Million pesos**

2016

Domestic EV Sales to **Php 4.44 Billion pesos**

PROJECTIONS

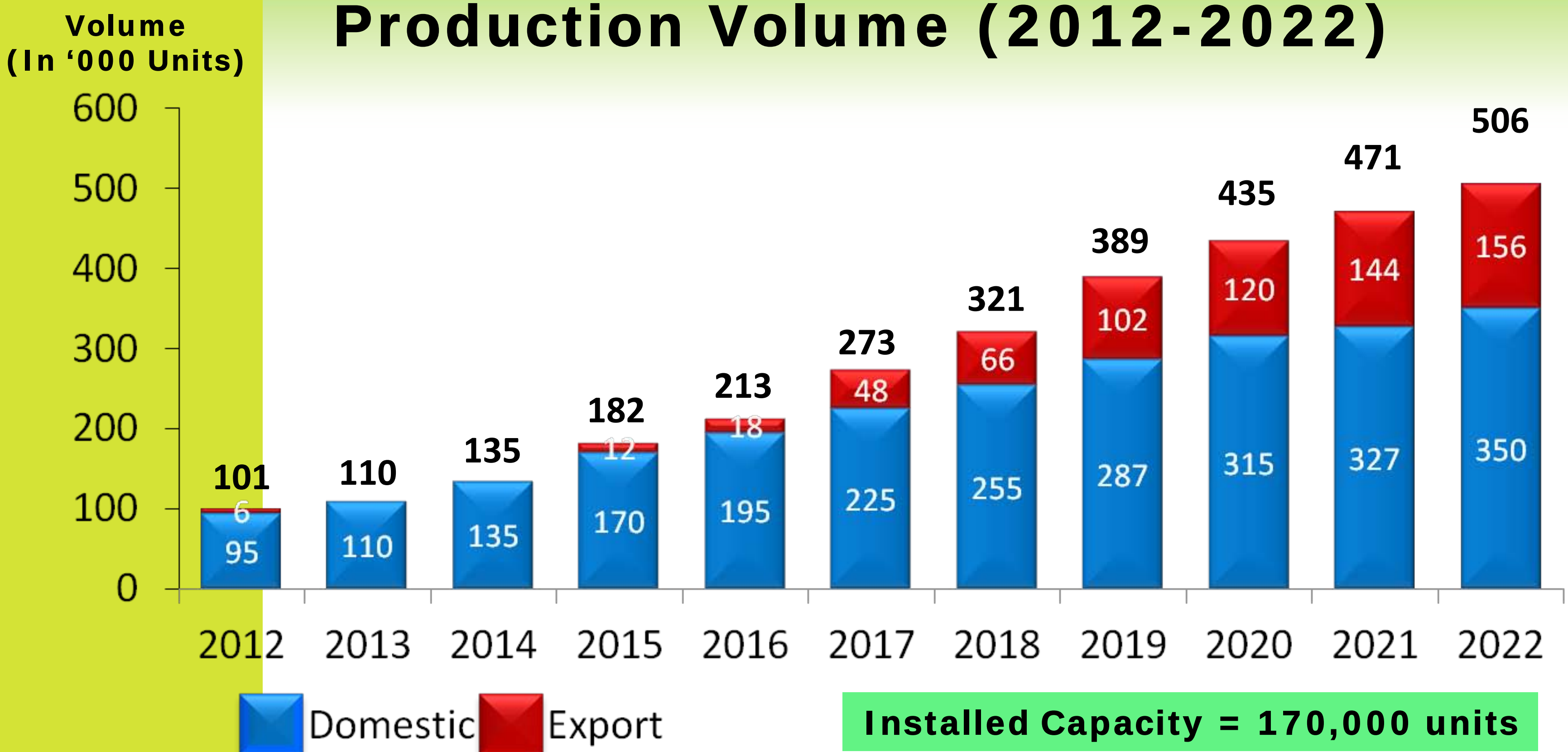
Electric Vehicle Association of the Philippines

EV Production Volume (2013-2017)

Electric Vehicles of all types (e-jeep, e-quad, golf carts, e-bike, e-trike, e-bus) are estimated to be manufactured locally from 38,220 units in 2014-15 to 69,145 units in 2017 or an average growth rate annually of approximately 11-13%.

PROJECTIONS

Automotive Vehicle Production Volume (2012-2022)



Installed Capacity = 170,000 units

- ❖ **Full capacity utilization and expansion by 2015**
- ❖ **50% increase in production capacity 2018 to 2019**

STRATEGIES

Strategies: Electric Vehicle

Electric Vehicle Association of the Philippines

- Policy formulation / new EV Program & incentives to attract investments / Creating a more predictable business environment
- Industry Clustering and Value Chain
- Competitiveness enhancement measures
- Complementation and Resources Integration

Strategies

Electric Vehicle Association of the Philippines

Policy formulation & incentives to attract investments / Creating a more predictable business environment	• Incentives to attract investment in critical auto & parts components as well as in new activities (eg E-vehicles, resources integration) • Policy reforms to build up domestic market: market expansion programs • Export development programs for auto & parts manufacturing • Policy certainty • Infrastructure development: roads, economic zones, logistics, power • Business intelligence unit
Industry Clustering and Value Chain	• Recreate economic models in pilot areas established over the Philippines • Implement Closing the Gap measures to improve the efficiency of the supply chain • Replicate economic models into various regional locations • Improve the value chain thru government intervention on technology upgrading and manpower education and training

Strategies

Electric Vehicle Association of the Philippines

Competitiveness enhancement measures

- Access to credit
- Trade & investment promotion & networking
- Building common development facilities
- Management & technology upgrading
- Development of product technology: auto R&D center
- Human resource development thru continuous education and training at firm and industry levels about Quality and Productivity, Technologies and Methodologies.

Complementation and Resources Integration

- Adoption of regional OE supply systems in local supply set-up
- Launch popular localization program for supply of sub-assys & systems; conduct of engineering study on logistical requirements of this supply mode
- Wage industry campaign in pooling of resources & creation of joint ventures
- Adopt modules of supply methods in regional purchasing centers by local purchasing network
- Integration of resources aligned with regional integration

GAP ANALYSIS

Local Electric Vehicle Industry Gaps

- Battery inefficiency
- Immature EV infrastructure
- EV servicing and maintenance
- High prices for EVs
- Financing
- EV Regulations

Gaps and Measures

Electric Vehicle Association of the Philippines

High Costs & Financing	• Passage of SBN 2856 (HBN 5460) to bring down the price given fiscal incentives • Passage of Alternative Fuel Vehicle Incentives Act of 2011 • Memorandum Order 40 (2012) grant of 4 to 6 years ITH to manufacturers/assemblers of Alternative Fuel Vehicles (FB's and EV's) • Creation of special vehicle pollution control fund (PHP 3.4B) to support EV manufacturing (source is Road User's tax, 7.5% for road transport pollution control program) • Provide a 25 year loan facility of about PHP 21.5B
Weak Support Mechanism	• Nationwide dispersal of charging stations • Address squarely problem on immature EV infrastructure

Gaps and Measures

Technological Issues	• Establish standards and regulations for EVs and charging stations • Technical working group to work out at least the minimum standards • Entice new investors for manufacturing to broaden production capabilities • Devise efficient methods and systems to lower cost of battery replacement and improve waste disposal • Develop systems to generate grid stability • Overcome problem on social acceptance thru rigid education campaign and training
Bureaucracy	• Update and systematize LTO process of registration • Fast track innovative process improvements to secure e-jeepney franchise with existence of moratorium

ACTION PLANS

Action Plans

1. Pursue operational & regulatory reforms

a. Re-visit regulations on motor vehicle importation, registration and operation

b. Strict implementation of vehicle registration (new and renewal) regulations through the Motor Vehicle Inspection System (MVIS)

c. Implement anti-counterfeit measures for parts & components

d. Reduce cost of doing business

- Pursue full interconnectivity of BIR, BOC and LTO
- Remove Certificate of Payment (CP) requirement for CKD
- Review duty treatment of sales of PEZA firms to domestic market

ACTION PLANS

2. Strengthen the automotive policy environment

a. Continue the grant of fiscal incentives under EO 226

Maintain listing of Motor Vehicles in annual IPP

b. Adopt tariff strategy that is supportive of the Roadmap

- Maintain MFN rates at current level until 2022
- Maintain single tariff headings for BOI-registered auto manufacturers
- Manage tariff reductions under free trade agreements (FTAs)

c. Support ASEAN MRA initiative and pursue Philippine accession to WP 29

Action Plans

Electric Vehicle Association of the Philippines

2. Strengthen the automotive policy environment (cont…)

d. Implement new Automotive Export Program

NEW AUTOMOTIVE EXPORT PROGRAM

Coverage	a. Export of CBU b. Direct & Indirect Parts Export
Support Measures	Export credits equivalent to 4% of: *a) Export price/unit for every CBU exported; and* *b) Export value of parts & components*

e. Implement an Automotive Parts Production Program

AUTOMOTIVE PARTS PRODUCTION PROGRAM

Coverage	Manufacture of OEM parts & components for the assembly of BOI-registered CKD models
Support Measures	Production credits equivalent to 4% of the local value of production parts & components directly supplied to vehicle manufacturers

Action Plans

2. Strengthen the automotive policy environment (cont…)

f. Support pending bills geared towards automotive industry development

g. Develop an Electric Vehicle & Alternative Fuel Vehicles Program

h. Issue and implement an Executive Order for a new automotive industry program

i. Create a body to coordinate cross-agency initiatives in support of automotive policy development, program implementation, lead the industry dialogue with other gov’t agencies and represent the Philippines in international fora on the auto industry sector

Action Plans

2. Strengthen the automotive policy environment (cont.)

j. Support the objective of upgrading tier 2 and 3 SME parts and components manufacturers by creating an Auto Industry Development Fund. The fund will support (1) the acquisition of high technology equipment and tooling, (2) training in advanced engineering skills, (3) pilot production of critical/high value parts and (4) related research and product testing activities

Action Plans

3. Address industry supply chain gaps

a. Expand coverage of IPP/EO 226 to include currently active MVDP participants.

b. Extend PEZA status to participants who export parts, components and CBU units.

c. Develop separate critical parts investment program as part of the EV and AFV program (e.g. electric motors, batteries, controller assembly, battery charging infrastructure)

Action Plans

Electric Vehicle Association of the Philippines

3. Address industry supply chain gaps

d. Expand/ strengthen local parts production base

DEVELOP INVESTMENT PROGRAM FOR CRITICAL PARTS & PRODUCTION PROCESSES

Coverage	Critical parts such as body panel stampings, large injection mouldings, engines, transmissions, transaxles, wiring harness; auto glass forming, finishing; steering & suspension parts, etc.
Support Measures	a. Grant of Pioneer Status under BOI and PEZA b. Extend direct access to financing facilities from GFIs / Multi-lateral assistance funds and/or donor agencies c. Assist SMEs on export market access d. Pursue APEC Automotive SME Export Support Program e. Establish testing facilities for automotive products

Action Plan

Electric Vehicle Association of the Philippines

4. Implement market development strategies

a. Upgrade/ modernize national vehicle fleet

EXCISE TAX PRIVILEGE TO ENCOURAGE FLEET REPLACEMENT WITH CKD

Special deduction from net manufacturer's price of BOI-registered CKD models, proportionate to extent of local value-added (LVA) content :

- 25% minimum LVA
- Maximum deduction up to 80% LVA

b. Strengthen AO 227, the "Buy Locally-Produced Vehicles" program for LGUs/NGUs/GOCCs.

ACTION PLAN

Electric Vehicle Association of the Philippines

4. Implement market development strategies

c. Develop government supported financing schemes for the purchase of locally-produced vehicles to upgrade the nation's vehicle fleet

d. Develop an END OF LIFE program in support of the clean air and related environmental and safety standards

Fiscal incentives for new (critical parts*, AFVs, EVs, sub-assembly systems) & export activities from 2014 onwards

EXISTING	NEW
▪ Income tax holiday from 3 to 8 years ▪ Tax & duty exemption on capital equipment, spare parts & materials ▪ Tax & duty exemption on imported raw materials ▪ Additional tax deductions: labor expense ▪ After ITH, exemption from local & national taxes, in lieu of these, special rate of 5% on gross income	▪ Extended ITH for high technology activities ▪ Additional tax deductions: export market development, innovation & R&D, construction costs ▪ Tax incentives for periodic increases in exports ▪ Exemption from internal taxes levied on domestic products manufactured outside zones ▪ Study tax exemption on domestically purchased supplies & materials

*****_Critical parts: body panel stampings, large injection mouldings, engines, transmissions, transaxles, wiring harness, auto glass forming, finishing , steering & suspension parts_

16th CONGRESS

EV INCENTIVE BILLS RE-FILED

SENATE

Senate Bill 255
Sen. Ralph G. Recto

"AN ACT PROMOTING ENVIRONMENTALLY SUSTAINABLE TRANSPORT BY PROVIDING INCENTIVES FOR THE MANUFACTURE, ASSEMBLY , CONVERSIONAND IMPORTATION OF ELECTRIC HYBRID AND OTHER CLEAN ENERGY VEHICLES AND FOR OTHER

Senate Bill 164
Sen. Antonio Trillanes

"AN ACT PROVIDING INCENTIVES FOR THE MANUFACTURE ,ASSEMBLY, CONVERSION AND IMPORTATION OF ELECTRIC, HYBRID AND OTHER ALTERNATIVE FUEL VEHICLES, FOR OTHER PURPOSES"

Senate Bill 2150 & 2151
Sen. Paolo Benigno Aquino IV

"AN ACT PROMOTING THE MAINSTREAM USE OF ELECTRIC, HYBRID AND OTHER ALTERNATIVE FUEL VEHICLES"

"AN ACT PROVIDING INCENTIVES FOR THE MAINSTREAM USE, MANUFACTURE, ASSEMBLY AND CONVERSION OF ELECTRIC, HYBRID AND OTHER

HOUSE OF REPRESENTATIVES

House Bill 387
Reps. Rufus & Maximo Rodriguez

"PROVIDING INCENTIVES FOR THE MANUFACTURE, ASSEMBLY, AND IMPORTATION OF ELECTRIC HYBRID AND OTHER ALTERNATIVE FUEL VEHICLES AND FOR OTHER PURPOSES"

House Bill 2316
Rep. Mar-Len Abigail S. Binay

"AN ACT PROVIDING INCENTIVES FOR THE MANUFACTURE, ASSEMBLY, CONVERSIONAND IMPORTATION OF THE ELECTRIC HYBRID AND OTHER ALTERNATIVE FUEL VEHICLES AND FOR OTHER PURPOSES"

House Bill 483
Rep. Rodolfo Biazon

"AN ACT PROMOTING ENVIRONMENTALLY SUSTAINABLE TRANSPORT BY PROVIDING INCENTIVES FOR THE MANUFACTURE, ASSEMBLY, CONVERSION AND IMPORTATION OF ELECTRIC, HYBRID AND OTHER CLEAN ENERGY VEHICLES, AND FOR OTHER PURPOSES"

House Bill 4334
Rep. Mark A. Villar

"AN ACT PROVIDING NON-FISCAL INCENTIVES FOR THE PURCHASE OF ELECTRIC, HYBRID AND OTHER ALTERNATIVE FUEL VEHICLES AND FOR OTHER PURPOSES"

<table>
<tr><th rowspan="2">INCENTIVES FOR ELECTRIC, HYBRID AND OTHER CLEAN ENERGY VEHICLES</th><th colspan="3">SENATE</th><th colspan="3">HOUSE</th></tr>
<tr><th>SBN 255
(Sen. Ralph G. Recto)</th><th>SBN 164
(Sen. Antonio Trillanes)</th><th>SBN 2151
(Sen. Bam Aquino)</th><th>HBN 387
(Reps. R. & M. Rodriguez)</th><th>HBN 2316
(Rep. M. Binay)</th><th>HBN 483
(Rep. R. Biazon)</th></tr>
<tr><td colspan="7">I. FISCAL INCENTIVES</td></tr>
<tr><td colspan="7">a. Exemption from Payment of Excise Taxes & Duties</td></tr>
<tr><td>- Manufacturers or Assemblers including Converters</td><td colspan="3">9 years</td><td>9 Years</td><td>9 Years</td><td>10 Years</td></tr>
<tr><td>-Importers</td><td colspan="3">9 Years</td><td>4 Years</td><td>9 Years</td><td>10 Years</td></tr>
<tr><td colspan="7">b. Exemption from Payment of VAT (for Purchase and importation of raw materials, spare parts, components and capital equipment)</td></tr>
<tr><td>- Manufacturers or Assemblers including Converters</td><td colspan="3">9 Years</td><td>9 Years</td><td>9 Years</td><td>10 Years</td></tr>
<tr><td>- Importers</td><td colspan="3">9 Years</td><td>X</td><td>X</td><td>10 Years</td></tr>
<tr><td colspan="7">c. Zero Percent (0%) VAT Rate (for sale of raw materials, spare parts, components and capital equipment used in the manufacture or assembly of electric, hybrid and other alternative fuel vehicles including the conversion into such vehicle)</td></tr>
<tr><td>- Manufacturers or Assemblers including Converters</td><td colspan="3">X</td><td>9 Years</td><td>9 Years</td><td>X</td></tr>
<tr><td>- Importers</td><td colspan="3">X</td><td>X</td><td>X</td><td>X</td></tr>
<tr><td colspan="7">d. Exemption from Payment of Motor Vehicle Users Charge</td></tr>
<tr><td>- Users</td><td colspan="3">YES</td><td>X</td><td>X</td><td>YES</td></tr>
<tr><td>- Operators</td><td colspan="3">YES</td><td>X</td><td>X</td><td>YES</td></tr>
<tr><td>- Converters</td><td colspan="3">X</td><td>X</td><td>X</td><td>YES</td></tr>
<tr><td colspan="7">e. Exemption from payment of Income Tax</td></tr>
<tr><td>- Manufacture of hybrid or alternative fuel vehicles for public conveyance</td><td colspan="3">X</td><td>X</td><td>X</td><td>10 Years</td></tr>
</table>

INCENTIVES FOR ELECTRIC, HYBRID AND OTHER CLEAN ENERGY VEHICLES	SENATE			HOUSE			
	SBN 255 (Sen. Ralph G. Recto)	**SBN 164** (Sen. Antonio Trillanes)	**SBN 2151** (Sen. Bam Aquino)	**HBN 387** (Reps. R. & M. Rodriguez)	**HBN 2316** (Rep. M. Binay)	**HBN 483** (Rep. R. Biazon)	**HBN 4334** (Rep. M. Villar)
I. NON-FISCAL INCENTIVES							
1. Priority in registration and issuances of Plate Number							
- Users	YES			X		X	X
- Operators	YES			X		X	X
2. Priority in Franchise Application							
- Operators	YES			X		X	X
3. Exemption from UVVRP (Number-Coding Scheme)							
- Users	YES			X		X	YES
- Operators	YES			X		X	YES
4. Free parking space in new establishments							
- Users	YES			X		X	X
- Operators	YES			X		X	X
5. Exemption from payment of toll fees							
	X			X		10 Years	X
6. Fifty percent (50%) discount on transport of hybrid or alternative fuel vehicles on sea vessels							
	X			X		10 Years	X
7. Fifty percent (50%) discount on parking fees for hybrid or alternative fuel vehicles in any and all establishments							
	X			X		10 Years	X
8. Reduced annual motor vehicle registration fee							
	X			X		X	YES
9. Reduced parking rate							
	X			X		X	YES

Senate Bill 2150: An Act Promoting Mainstream Use of Electric, Hybrid and Other Alternative Fuel Vehicles

Salient Features

- Creation of a Coordinating Council for Promotion of Electric, Hybrid and Other Alternative Fuel Vehicles
    - *To expedite identification, prioritization, and resolution of issues affecting the entire EV supply chain*
    - *As a Sub-Committee under the Industry Development Council of the DTI*

- Composition of the Council
    - Secretary, Department of Trade and Industry - Chairperson
    - Secretary, Department of Transportation and Communication - Vice-Chairperson
    - Secretary, Department of Energy - Vice-Chairperson
    - Secretary, Department of Finance - Member
    - Secretary, Department of the Interior and Local Government - Member
    - Secretary, Department of Science and Technology - Member
    - Three (3) Representatives from the Industry Sector to be elected by the Council
    - Three (3) Representatives from the Civil Society to be elected by the Council

Senate Bill 2150: An Act Promoting Mainstream Use of Electric, Hybrid and Other Alternative Fuel Vehicles

Salient Features

- Duties and Responsibilities of the Council

1. *Formulate incentives to address the high acquisition cost of electric vehicles, hybrid and other alternative fuel vehicles and operating cost of supporting infrastructures particularly charging stations.*
2. *Develop and recommend standards and specifications which address the performance, quality and safety issues of electric vehicles, battery, charging stations and connectors, and repair and maintenance in accordance with international standards.*
3. *Review and recommend appropriate classification for electric, hybrid and other alternative fuel vehicles and the corresponding parameters for Motor Vehicle Inspection System (MVIS) approval.*
4. *Review and recommend policy for allowing the entry of and promoting electric, hybrid and alternative fuel vehicles fleet operations.*
5. *Recommend modalities for the utilization of the Special Vehicle Pollution Control Fund (SVPCF), a special trust account managed by the Road Board created by virtue of Republic Act No. 8794 or any sources of funds to implement air quality improvement projects involving the use of electric, hybrid and other alternative fuel vehicles.*
6. *Coordinate with local government units (LGUs) in identifying and allocating land and property within their locality for use as public charging stations for electric or hybrid vehicles or refuelling stations for alternative fuel vehicles.*
7. *Coordinate with the electric power industry stakeholders, particularly, the Energy Regulatory Commission (ERC) and electric distribution utilities and cooperatives, in the preparation of their electric systems and network to accommodate the connection of electric or hybrid vehicles, charging equipment and stations.*
8. *Undertake Information and Education Campaign (IEC) on the proper use, maintenance, repair and disposal of electric, hybrid and alternative fuel vehicles.*
9. *Monitor resolution of issues affecting the electric, hybrid and alternative fuel vehicle and undertake action as may be determined by the Council.*

Senate Bill 2150: An Act Promoting Mainstream Use of Electric, Hybrid and Other Alternative Fuel Vehicles

Salient Features

- Incentives to Users of Electric, Hybrid and Other Alternative Fuel Vehicles
  - *Priority in Registration and Issuance of Plate Number. – Registration and renewal of registration of electric, hybrid and other alternative fuel vehicles shall be prioritized by the Land Transportation Office (LTO) for nine (9) years from the effectivity of this Act. A special type of vehicle plate to be prescribed by the LTO shall be exclusively issued to all electric, hybrid and other alternative fuel vehicles upon registration.*
  - *Priority in Franchise Application. – Public Utility Vehicle (PUV) operators exclusively utilizing electric, hybrid and other clean energy vehicles shall be granted priority by the Land Transportation Franchising and Regulatory Board (LTFRB) in the approval of applications for franchise to operate, including its renewal, for nine (9) years from the effectivity of this Act.*
  - *Exemption from Unified Vehicular Volume Reduction Program (UVVRP) or Number-Coding Scheme. – All electric, hybrid and other clean energy vehicles shall, for nine (9) years from the effectivity of this Act, be exempted from the mandatory Unified Vehicular Volume Reduction Program (UVVRP) or Number-Coding Scheme being implemented by the Metro Manila Development Authority (MMDA) and other local government units (LGUs) concerned.*
  - *Provision for Free Parking Spaces in New Establishments. – Business and commercial establishments to be constructed after the effectivity of this Act are mandated to provide exclusive parking spaces free of charge for all electric, hybrid and other alternative fuel vehicles. No building permit shall be issued for the construction of business and commercial establishments that include parking spaces unless the owner submits an affidavit that there shall be free parking spaces to be exclusively be designated for electric, hybrid and other alternative fuel vehicles for nine (9) years from the effectivity of this Act.*

DOMESTIC MARKET EXPANSION & OTHER POLICY REFORMS

FISCAL	OTHERS
▪ Study tax exemption on domestically purchased supplies & materials ▪ Study excise tax reduction from 30 to 35% (depending on value added) on vehicles representing 70% of vehicle demand in the market	▪ Elimination of smuggling & complete banning of imported second hand vehicles (RA 8506, EO 156) ▪ Government procurement of locally manufactured vehicles; strengthen AO 227; promote locally manufactured vehicles

COMPETITIVENESS ENHANCEMENT MEASURES

Electric Vehicle Association of the Philippines

STRATEGY	SPECIFIC MEASURES
Improve credit access	▪ Government support in developing financial schemes for auto SMEs (Small Business Corporation, Land Bank, DBP)
Trade & investment promotion & networking	▪ Industry-led market development campaigns ▪ Market search & intelligence by foreign consular trade offices ▪ Interactive business selling missions (OBM to Taipei for auto parts; inbound yearly business missions to US aftermarket networks, Australia, New Zealand, China, India & position the Philippines as hub for regional clusters for export of countries where we have an FTA ▪ Participation in local/foreign trade business matching events

Competitiveness Enhancement Measures

Electric Vehicle Association of the Philippines

STRATEGY	SPECIFIC MEASURES
Technology & management upgrading/ Development of product technology/ Common development facilities	▪ Establishment of Automotive Excellence Center: human resource development programs, skills certification system, R&D for high technology parts, autoparts quality testing, common facility for rapid prototyping for supply chain, common facility for computer aided machining, export promotion center, research studies on market trends ▪ Coordination with DOST-MIRDC: common facilities ▪ Industry Fund for technology upgrade ▪ Adoption of national standards for auto part & certification of international quality systems (TS 16949) & environmental management system (ISO 14001)

COMPETITIVENESS ENHANCEMENT MEASURES

Electric Vehicle Association of the Philippines

STRATEGY	SPECIFIC MEASURES
Human resource development	▪ Manpower skills development (fielding of foreign technical experts; skills, education & training specialization) ▪ Implementation of APEC pilot programs to upgrade capabilities of auto SMEs ▪ Embark in company-wide productivity improvement programs

CREATING MORE PREDICTABLE BUSINESS ENVIRONMENT

Electric Vehicle Association of the Philippines

STRATEGY	SPECIFIC MEASURES
Consistent & more certain policy environment	▪ Align Philippine standards with other countries: labor incentives; customs, procedures & systems; harmonize technical, environment & safety standards ▪ Strict implementation of vehicle registration regulations under MVIS ▪ Full implementation of automated import & export documentation system ▪ Streamline regulatory procedures to reduce cost -- full interconnectivity of BIR, BOC, & LTO

Creating more predictable business environment

Electric Vehicle Association of the Philippines

STRATEGY	SPECIFIC MEASURES
▪ **Infrastructure development**	▪ Power cost ▪ Allocation of road user's tax to improve infrastructure ▪ High quality economic & free trade zones ▪ Efficient logistics services
▪ **Business intelligence unit**	▪ Monitor auto developments in the country & abroad ▪ Creation of auto database: indicators, FTAs, policies & regulations within & outside the region ▪ Regular analysis of market & technology trends

GENERAL RECOMMENDATIONS

General Recommendations

Electric Vehicle Association of the Philippines

- Develop electric vehicle standards and laws on EV incentives and operating guidelines
- Stimulate the market and get the support of the LGUs, LTFRB and LTO to realize the projected demand
- Partner with a financing institution
- Conduct R&D on the Conversion Kit and Design & Prototype of the proposed eTrike Unit should happen before the Manufacturing Business is pursued
- Manufacturing business can be supported by the projected demand and further studies which can lower the cost per eTrike unit

TECHNICAL RECOMMENDATIONS

SUMMARY

1. Advocate for quick passage of "EV Bill" to lower costs of sourcing EVs
2. Stimulate increase in EVs and develop charging station support

   a. ***Importing:***
   Direct importation of electric vehicles as designed by originating country
   > Recommend that CBU units be imported for initial market penetration

   b. ***Conversion:***
   Although highly demanded by market, need to do R&D first before component conversion solution can be made reliable & standard for all types of motorcycles
   > Recommend that a conversion kit be developed quickly

   c. ***Manufacturing:***
   Set-up own manufacturing plant and do ODM of eTrike and eJeep. Work on lowering the cost of eTrikes (as demanded by market) and provide maintenance support services.
   > Recommend that eTrike design and prototype be done first then explore options on partnership/JV/buy-in of existing players

Philippine Electric Vehicle Industry

Thank you

Prepared by:

Romeo M. Villadolid, Jr.

ROMMEL T. JUAN

President