

# Sharing Session at ICLAD 2018

## People Transition Towards Reimagining TNB



**Career Enhancement Management**

# TNB's history...

## Electricity Department

1946

- Electricity first made its appearance in this country at the turn of **the 20th century**, and the earliest record of power generation can be traced back to a small mining town in **Rawang, Selangor**



## Central Electricity Board

1949-1965

- Lembaga Letrik Pusat (Central Electricity Board, CEB)** was established and came into operation on 1 September 1949.
- The Board was to become heir to three major projects considered by the Electricity Department following its establishment in April 1946 which were the **Connaught Bridge Power Station, Cameron Highlands Hydroelectric Project** & the development of a **National Grid**.
- CEB eventually became the owner of **34 power stations**

## National Electricity Board

1965 -1990

- On 22 June 1965, Central Electricity Board (CEB) of the Federation of Malaya was **renamed** the Lembaga Letrik Negara (National Electricity Board, NEB) of the States of Malaya.
- By the 1980s, the Board was supplying the **whole peninsula** with electricity, replacing the Perak River Hydro Electric Power company (PRHEP), Kinta Electrical Distribution Co. Ltd (KED), Penang Municipality, and Huttenbach Ltd
- On 4 May **1988**, Prime Minister Mahathir Mohamad announced the government's decision on a policy of **privatisation**.

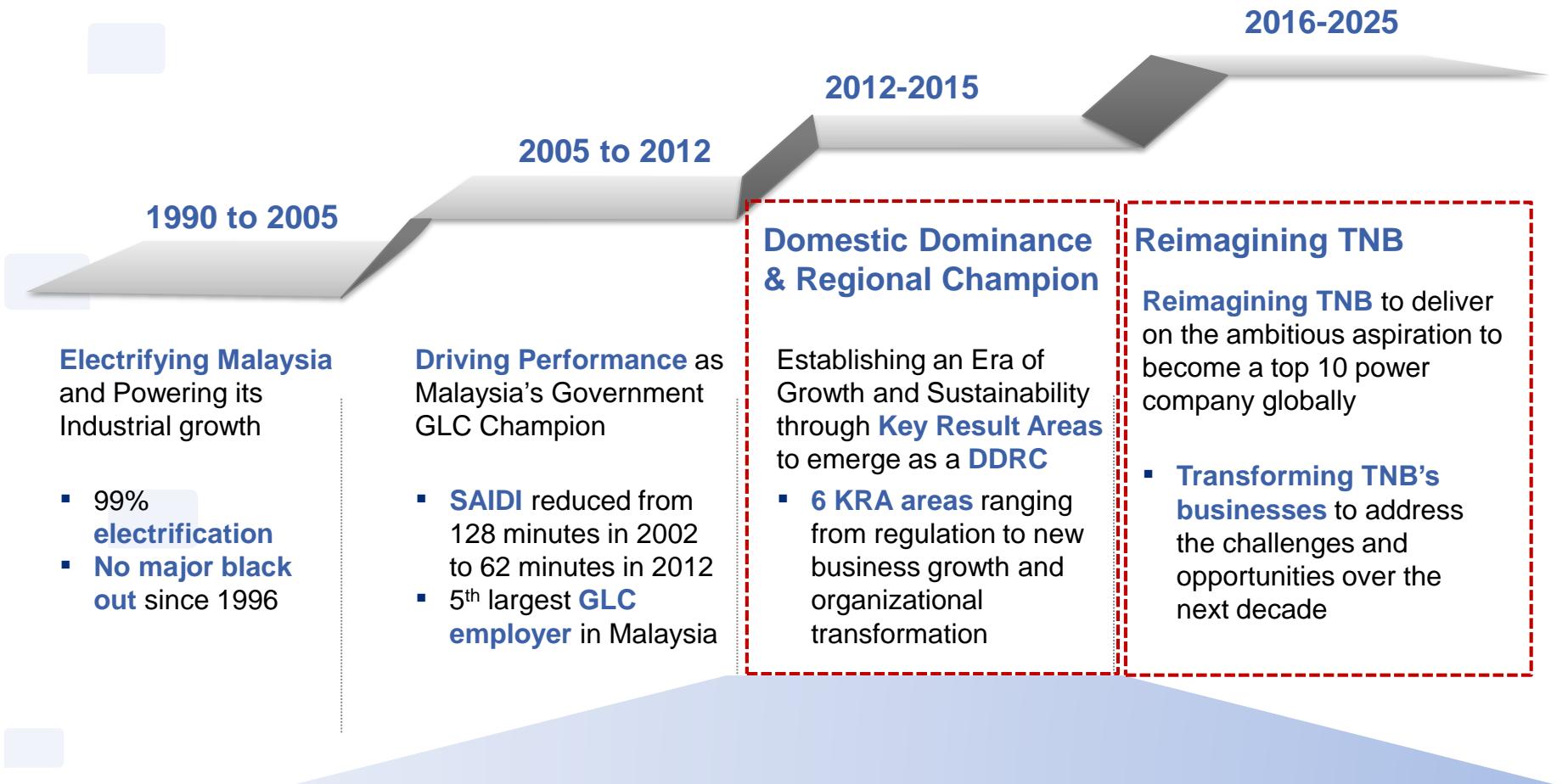


## Tenaga Nasional Berhad

1990

- Tenaga Nasional Berhad (TNB) was formed in 1990** by the Electricity Supply Successor Company Act 1990, to succeed the National Electricity Board (NEB) of the States of Malaya.

# Since then, TNB has been progressive in its transformation programs and has strong aspiration towards becoming a Global Energy Champion



**No 2** Power utility in Asia (Platts)

**#1 Largest company on KLSE**

**Global footprint in 4 countries**



Started in 2012, TNB's DDRC Transformation was to further entrench TNB leadership in Malaysia and establishing a firm presence in the region through delivery of 6 Key Result Areas (KRAs)



Better. Brighter.

## Domestic Dominance, Regional Champion (DDRC)



KRA5

Transform Organization

# By end FY2016, the transformation program has significantly improved TNB's business operations, financial positions and organization capabilities

**KRA 1**

Shape regulatory outcomes



**ICPT**

successfully implemented

**82%**

Strong Corporate Reputation in 2017

**KRA 2**

Exceed customer expectations



63% customers received supply within **3 days** of application



**8.1**

CSI score in FY2015/2016



**#8**

position in ease of doing business (electricity industry) by World Bank ranking

**KRA 3**

Drive operational & cost efficiencies



**749** Total of **cost efficiencies** achieved Mn through 22 initiatives



**Generation Excellence**  
Rolled out to SPVs



**Procurement Transformation Programme** in delivery stage

**KRA 4**

Grow profitable New Business



**2.9 Bn**

revenue from subsidiaries resulting to RM220m PAT



Investment in **GAMA Enerji Turkey** and **GMR India** with expected EIRR of 11-13%



**TNB-IT** subsidiary formed to pursue **TELCO business**

**KRA 5**

Transform organization

Improved productivity from **RM1.46 to RM1.55** revenue/employees

**49 Future CEOs** on TOD through **TNB Leadership Drive**

Establishment of strategic and innovative functions enabled by Center of Expertise (COE), Business Partner (BP) and Shared Service Center (SSC)

**KRA 6**

SESB Turnaround

CSI improved from **70% to 73%**



Supply Connection time improved from **48 to 5 days**



ESS improved from **69% to 75%**

# Global trends and domestic business environment continue to pose challenges to TNB business... change is inevitable

## Global Trends

### Economic shifts

Power is shifting towards Asian and emerging market economies

### Shareholder expectations

Shareholders demanding not just greater returns but sustainable/green returns and transparency

### Technology disruptions

Dramatically changing the power sector and customer demands

### Regulations evolving

Increasing competition due to market liberalisation

## Domestic Trends

### Slowing demand growth

2020 forecast electricity sales growth to reduce to <1.92%

### Overcapacity

Generation reserve margin rise from 25% to 44% in 2021

### Renewables Lockout

TNB has only managed to secure 12% of LSS capacity

### Gas Market Deregulation

First step towards a market-based pricing of energy

### Market Liberalization

ST is pushing for electricity market by 2025; part of RMK11

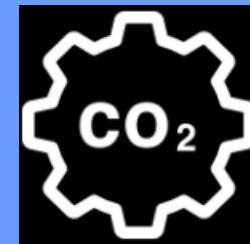
### Distributed Renewables

NEM targeting 500MW of roof top solar

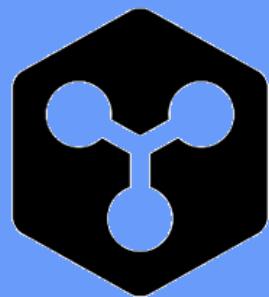
## Utilities too need to transform in lieu of the 4De triggers



Deregulation



Decarbonization



Decentralization



Digitalization

Standing still is not an option... In midst of these challenging trends, there are significant opportunities ahead for TNB... hence Reimagining TNB



## 1 Growth

Compete to capture new growth opportunities in **Emerging markets**

## 2 Customer

Win the **Digital Age customer** through anytime, anywhere, mobile service and beyond the kWh services

## 3 Government

Manage **relationship** with the regulators to future-proof and transform TNB's core power business

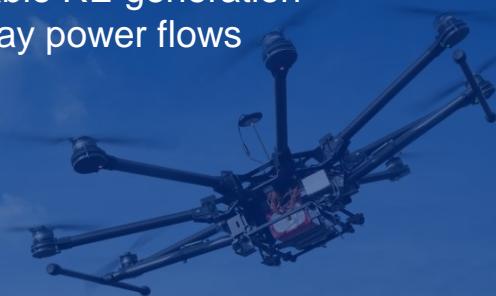
## 4 Productivity

Unleash step change in productivity using **technology** for automation and productivity improvements

# Digital Technologies are a part of the journey towards Reimagining TNB.....

## Robust capability

More variable RE generation and two-way power flows



## Advanced maintenance

Automatic grid status, evaluation and data collection

Smart meters and grid communication system installed to improve grid functionality and customer control



### Advanced metering infrastructure

Control system upgrade enabling rapid fault detection and faster grid restoration



### Distribution Automation

Remote data collection to improve operations and maintenance



### Geospatial Information System

## Grid of the Future



### Volt-Var optimization

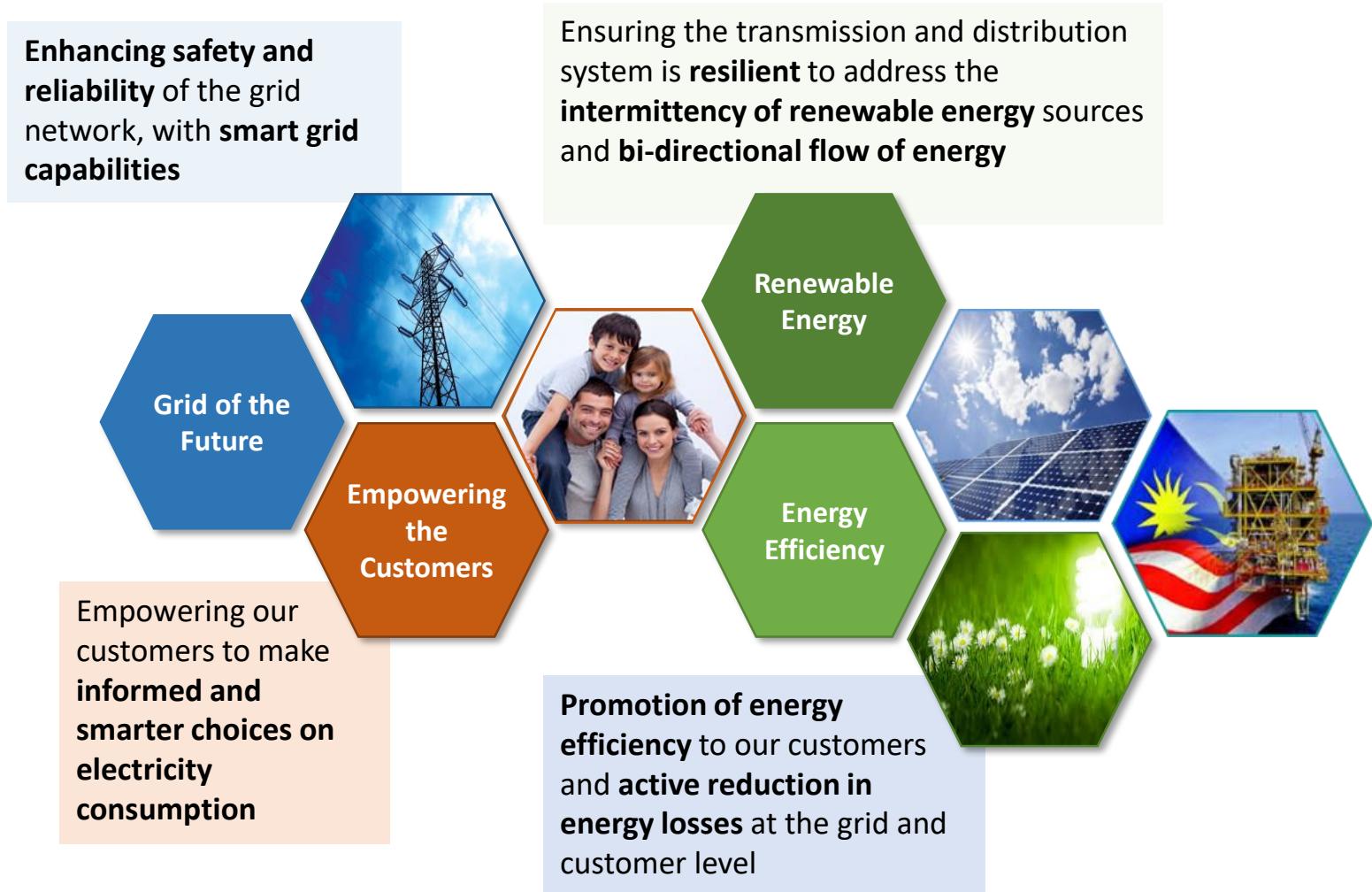
Improved grid stability and reliability through reduced reactive power import



### LED Streetlights

LED streetlamps for all state capital

**Empowering our customers and enhancing the grid continue to be our priority....**



# Empowering Customers through the Grid of the Future

TNB have and are initiating new skills amongst employees via reskilling , upskilling and new hiring to support the initiatives towards Reimagining TNB



Studies indicate that  
~ **6 to 10% of employees** will be  
affected by these initiatives

## Smart Billing System

## Conventional Power Plant phase-outs

## More RE initiatives

Demarcation of roles in support service functions  
(Centre of Expertise and Business Partners)

## Centralisation of support services

## More automation (e.g. Auto-billing)

## TNB's approach in managing people transition is aimed at improving productivity and towards realizing Reimagining TNB



Promote **growth** for TNB employees at all levels via engagement, development and learning programs



Promote and inculcate **value creation** for all initiatives (e.g. Project Assignment)



Actively and continuously engaging employees at all levels to **build trust, commitment and harmony** amongst employees in TNB



**Thank You**

