

Navigating The Future

Disrupt or Be Disrupted Digital Darwinism & Its Impact on Energy Systems





Digital Disruption of Utilities Going Towards Green

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Why Digitization of Electricity?

- Digital /Smart Tech Future of intelligent Energy System
- Energy Miracle for Global Warming

“Almost every way we make electricity today, except for the emerging renewable & **nuclear** (?) puts out CO₂. And so, what we're going to have to do at a global scale is create a new system. And so, we need **energy miracles**”



—Bill Gates

Engineers Disruption

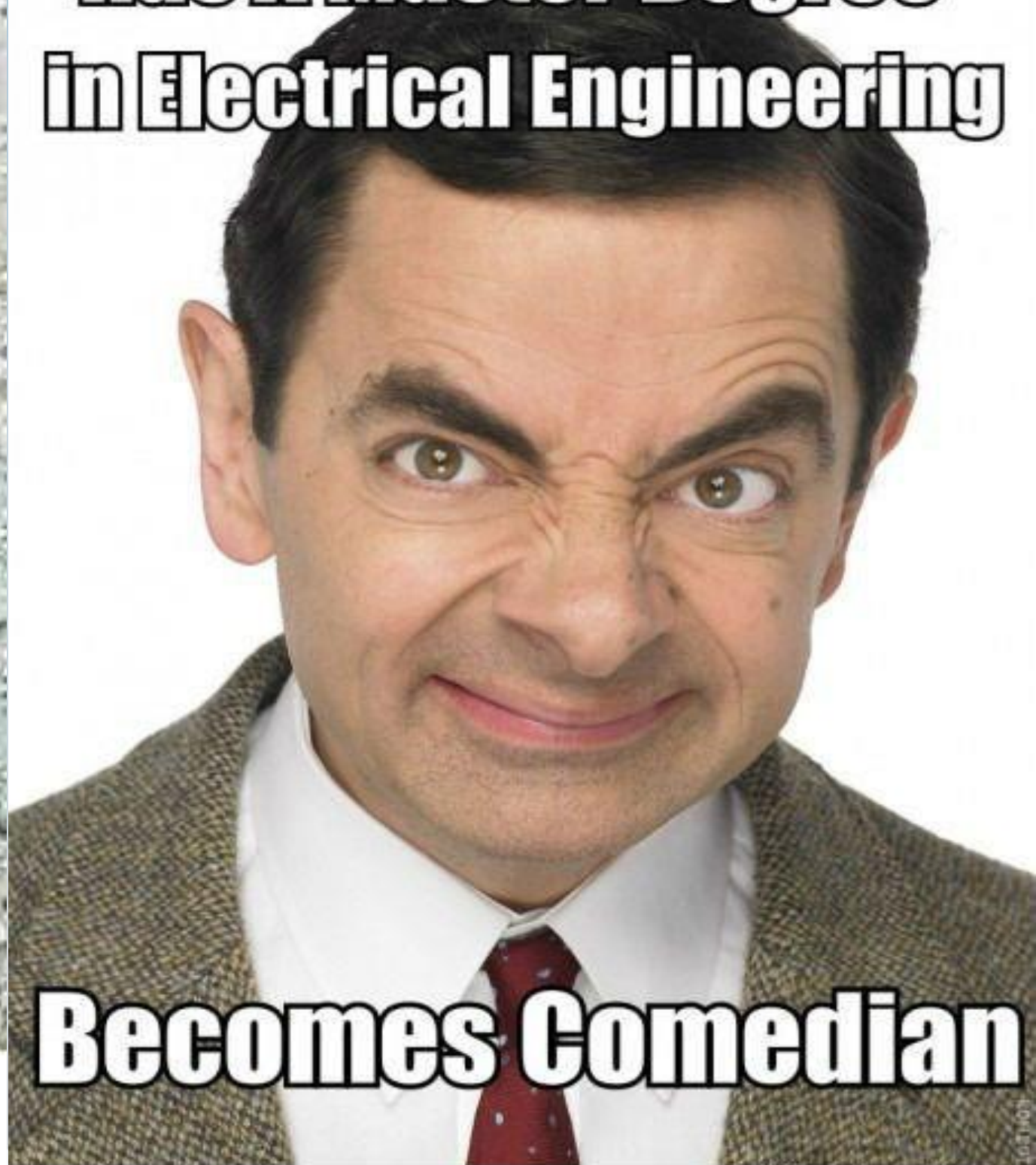
Civil Site Engineer Life History



In University

On Job

**Has A Master Degree
in Electrical Engineering**





Becomes Comedian

Fossil Fuel Death by Electric Vehicle

- * After 2025 – NO New Vehicle will be Fossil Fuel driven
- * EVs more sustainable
- * Cost of EV ↓
- * EVs run on most inefficient Fossil fuel electricity -
less pollution than fossil fuel driven Vehicle
- * But Old Inefficient Fossil Fuel driven run Vehicles will
be on roads in Under Developed countries after 2025



Utilities Disruption Through Solar & TE

- * Cost going 
- * Better & less costly efficient Storage
- * CSP cost max USD 20 per MWh in 2018
- * Roof Top Solar Customers will need No Investments
- * Vendors invest on Roof Top Solar on profit sharing basis
- * Consumers will become Seller to Utilities-Net Metering
- Utility business 
- Transactive Energy

Block chain Technology



CRYPTO CURRENCY



1 Bit coin=7407.03 USD ↓

1 SLR = 0.25913 USD ↓

1 Bit coin=28,584.22 SLR



Launched – 14 Jan 2014

1 MWh = § 1 SLR Block Chain award

Low Carbon

Reliable - Solar Energy available

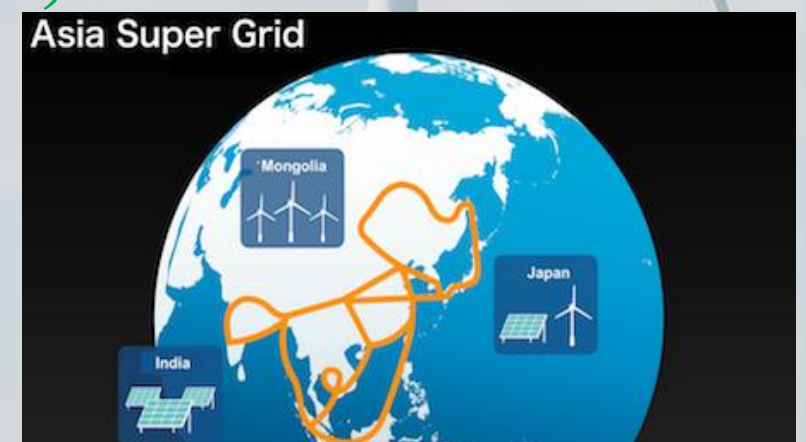
Growing



Future Asia Super Grid - RE Based

Future grid = Deep integration of Infrastructures & ICT

- **ICT will be crucial as New Super Grids come online**
- **Russia, China, Mongolia, South Korea & Japan**
- **Wind and solar power in Mongolia's Gobi region**
- **Hydro & Thermal power in Russia's Far East region**
- **PV & Wind power in South Korea and Japan**
- **Wind and Solar power in China**
- **Result - Pan Asian multinational grid : 36,000 km**
- **Massive RE flow (Fukushima)**



Utility of the Future

Grid environmental friendly

- Business Partnering
- Energy Mgt & Energy Trading System
- Planning & Operation
- System Installation & Maintenance
- Asset Management and Service

Utility Distributors Company

Virtual Utility Company

Energy service providers

Retails Energy Market

Internet

Generation

Residential

Commercial

Industrial

Distributed Gen.

Cloud Based & Virtual Utilities

The Future

- **Future Utility develop/deploy Digital/TE techniques**
 - **Micro Grid for sustainability**
 - **Super Grid for intercontinental connectivity**
 - **No monopoly by Utilities**
 - **Renewable Energy will govern**
 - **Renewable mandatory for Sustainability**
 - **Renewable for Green the Planet**
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Our Team



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THANK YOU
FOR ATTENDING THE SESSION

