

Environmental Social Governance

GREEN BUILD CONFERENCE 2022

Accelerating Sustainability in Malaysia's Real Estate Sector

14 JULY 2022

9.00AM - 6.00PM

Venue: Avante Hotel, Bandar Utama

REGISTER NOW!



CPD Points Available (Red)
LAM, MBO, SI, LIPEN, BEM
and GreenRE

REGISTRATION FEE

REHDA Member / Members of Supporting Partner (Normal Price)	Non Member
RM988.00	RM1188.00
REHDA Member / Members of Supporting Partner (Group of 2 pax)	Non Member (Group of 2 pax)
RM1307.00	RM1687.00
REHDA Member / Members of Supporting Partner (Group of 4 pax)	Non Member (Group of 4 pax)
RM2201.00	RM2841.00
REHDA Member / Members of Supporting Partner (Group of 5 pax)	Non Member (Group of 5 pax)
RM2500.00	RM3200.00
REHDA Member / Members of Supporting Partner (Group of 10 pax)	Non Member (Group of 10 pax)
RM4500.00	RM5200.00



Co-organized by Banking Partner Partner Supporting Partners



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For Sponsorship Opportunities: Mr. Khairil | 6016 925 9257 | ksyazwan@rehdainstitute.com

Beyond Benchmarking and Reporting for ESG. Future Trends



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The background image shows the interior of a modern building. The ceiling is a complex, curved structure with a series of parallel, rib-like elements. The walls are also curved, creating a sense of fluidity and movement. The lighting is soft and even, highlighting the architectural details.

Example of “Beyond Benchmarking”

Winner

2020 WorldGBC Asia Pacific Leadership in Green Building Awards





Example of “Beyond Benchmarking”

Winner

2020 WorldGBC Asia Pacific Leadership in Green Building Awards



The rare case of "the informed client"

who understands that
going green is the right
thing to do – and makes
good sense economically

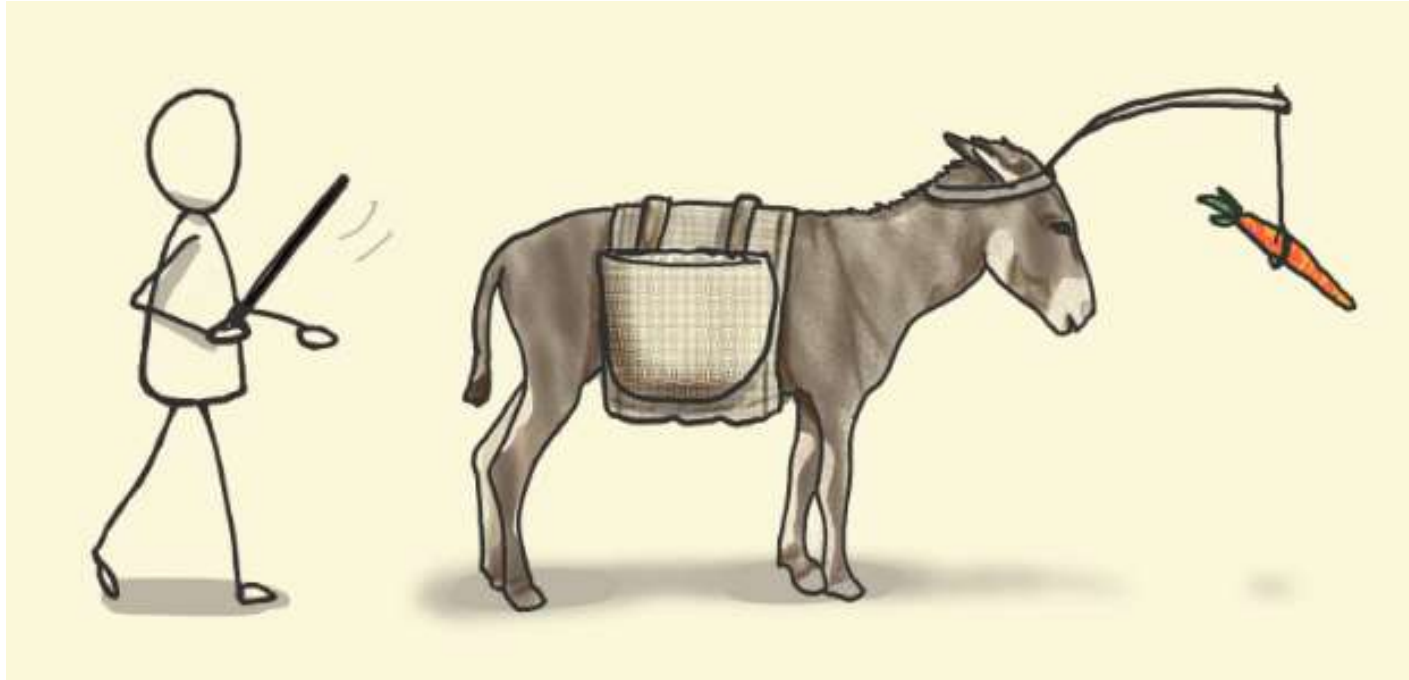
*Client asked for a "cheap factory",
which means a high performance
building because he had to foot
the bill of operating expenses.
40% measured energy savings &
high staff satisfaction achieved.*



PARAMIT – factory in the forest (Malaysia)

- Client/ Owner: PARAMIT
- Architecture Firm: DESIGN UNIT ARCHITECTS SDN BHD
- Green Building Design : IEN CONSULTANTS
- Engineering & Construction: WEB STRUCTURES SDN BHD
- Mechanical & Electrical Engineer: PERUNDING EAGLES ENGINEERS SDN BHD
- Project Management: JLL SDN BHD
- Main Contractor: SOUTH ISLAND BUILDING SDN BHD
- Photography: LIN HO PHOTOGRAPHY

Carrot & Stick



Example of STICK

from last month

What happens when you pay
the real price for petrol?



I filled up the tank of my parents' car
with 57.2 liters of Ron95 petrol in Denmark,
and paid:

RM620 !

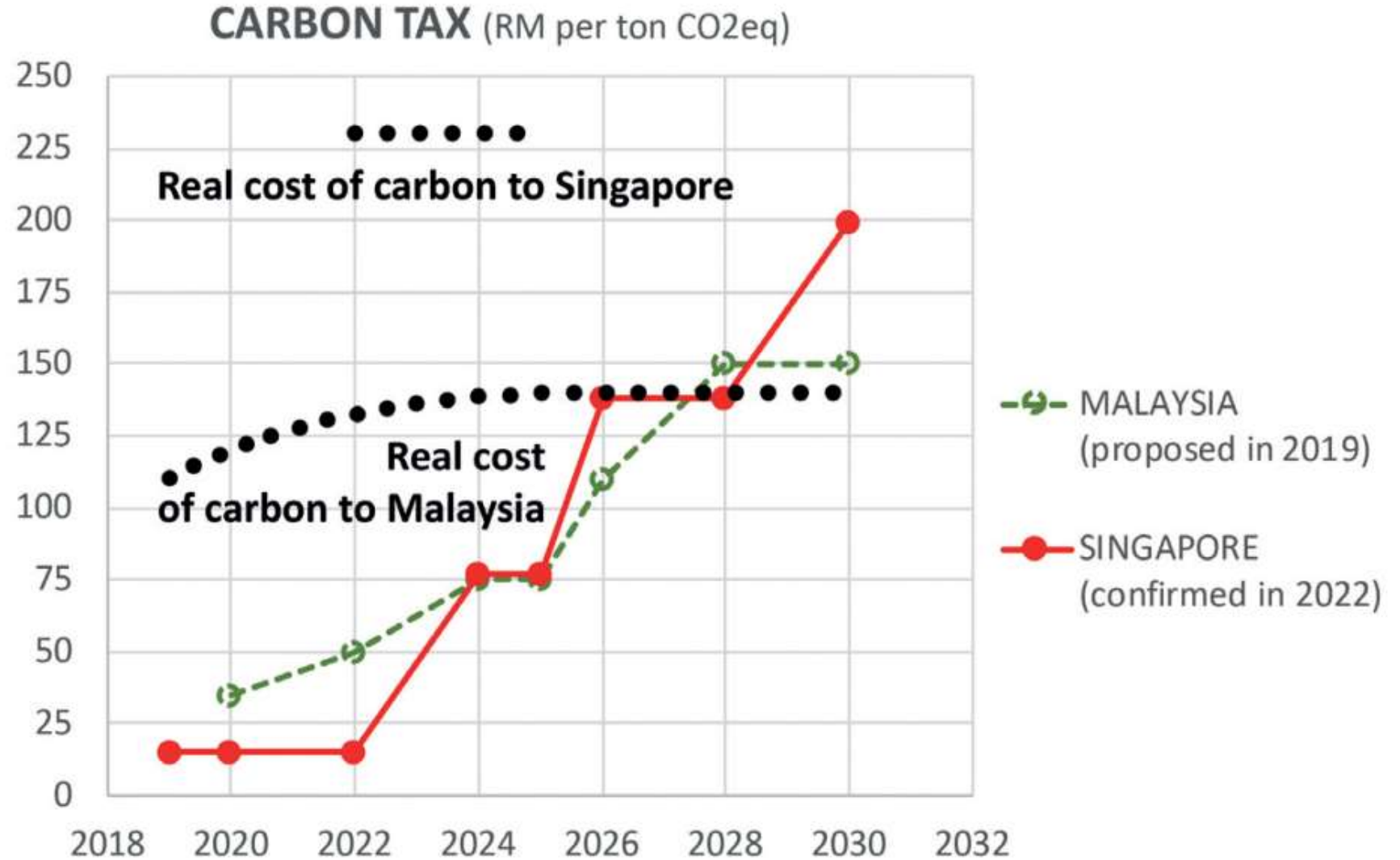
Petrol In Denmark, June 2022	Danish currency	Malaysian currency	Petrol in Malaysia
Price per liter Ron95 petrol	17.49 kr/liter	10.84 RM/liter	2.20 RM/liter
Pumped	57.2 liter	57.2 liter	57.2 liter
Price charged on my credit card	1000 kr	619.78 RM	125.79 RM

Using economic
principles to
steer the society
in the desired
direction:

Making the
green decision
the natural
decision

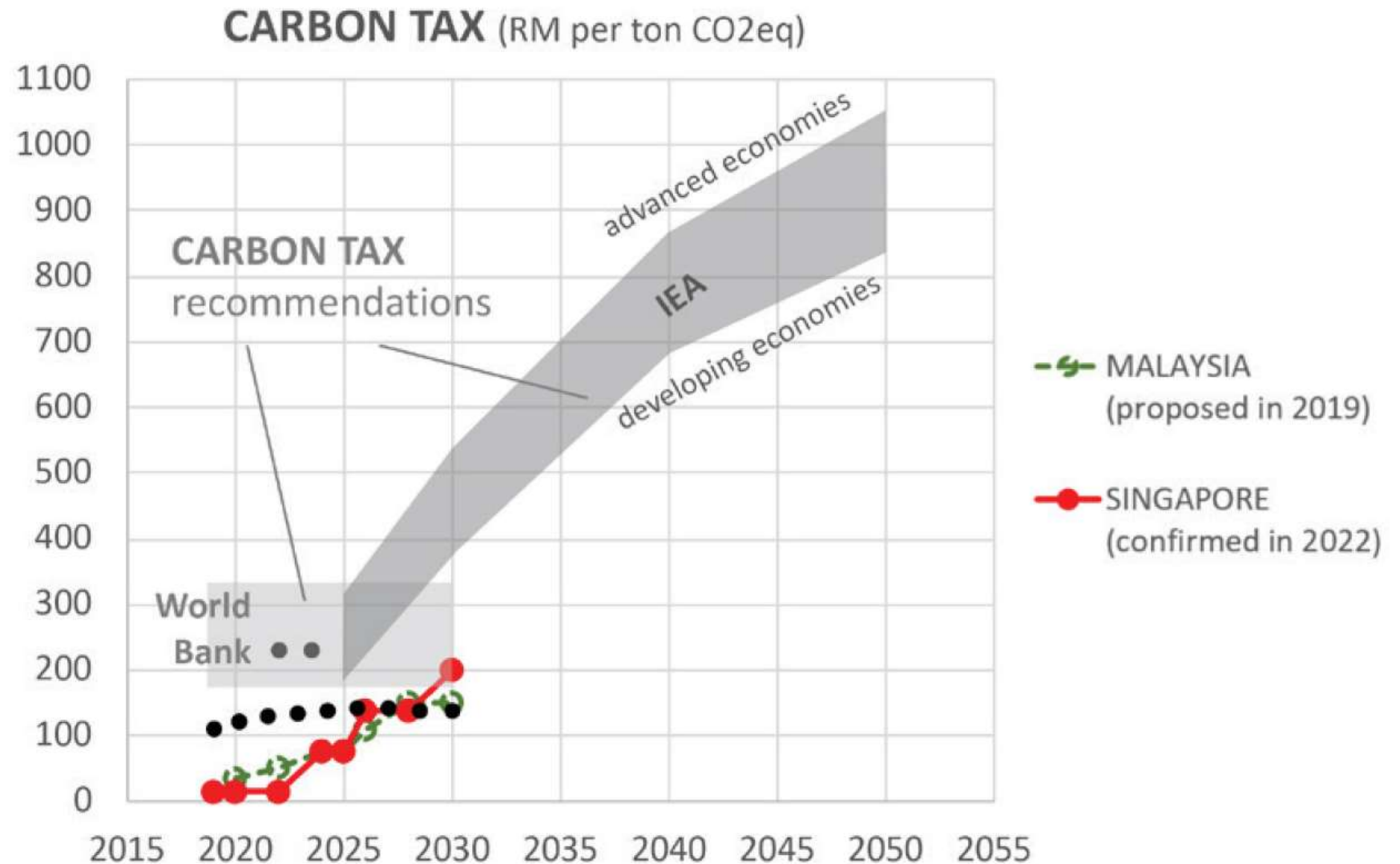
The Carbon Tax STICK

on the way?



The Carbon Tax STICK

on the way?



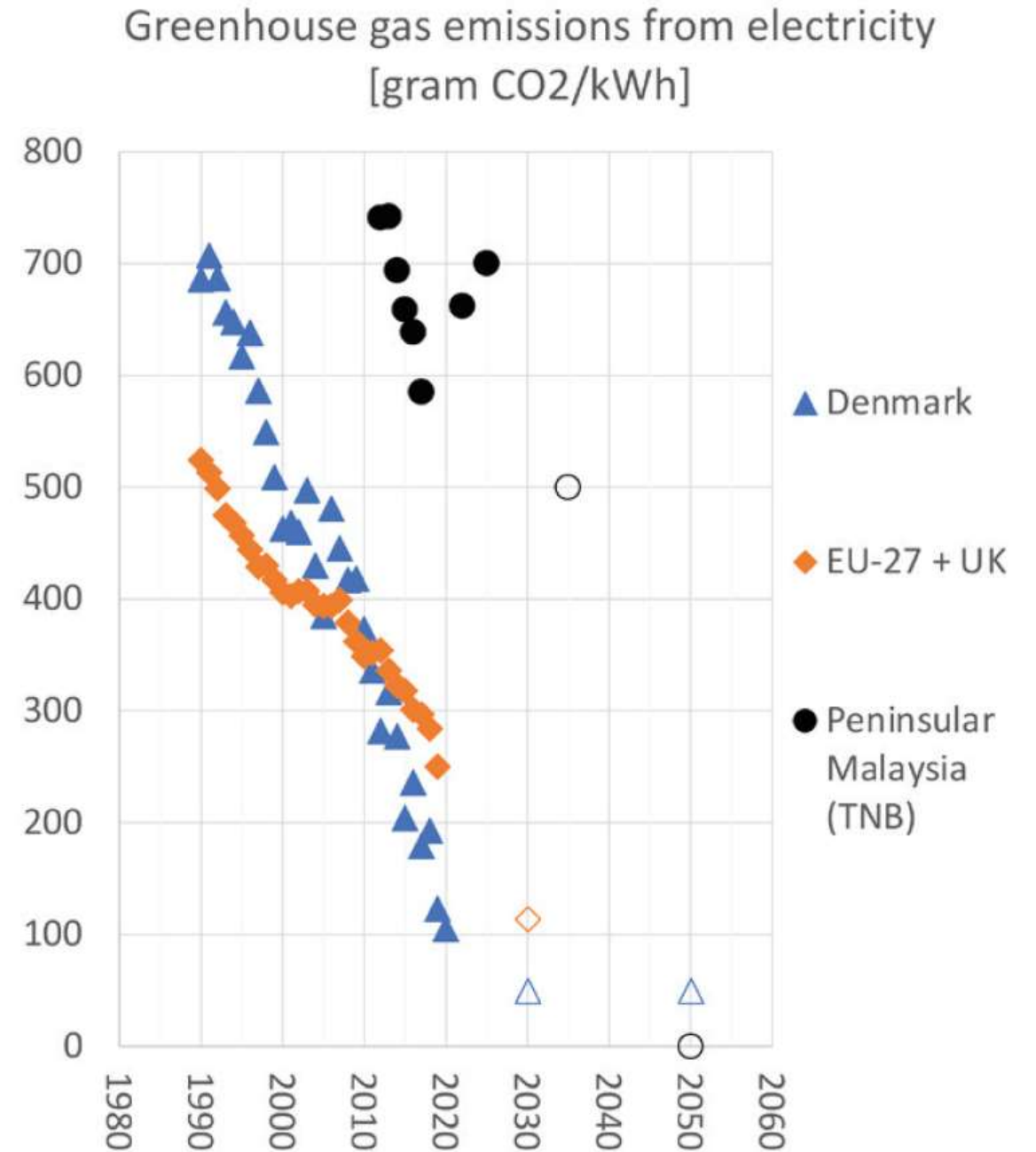
Levelling the Playing Field



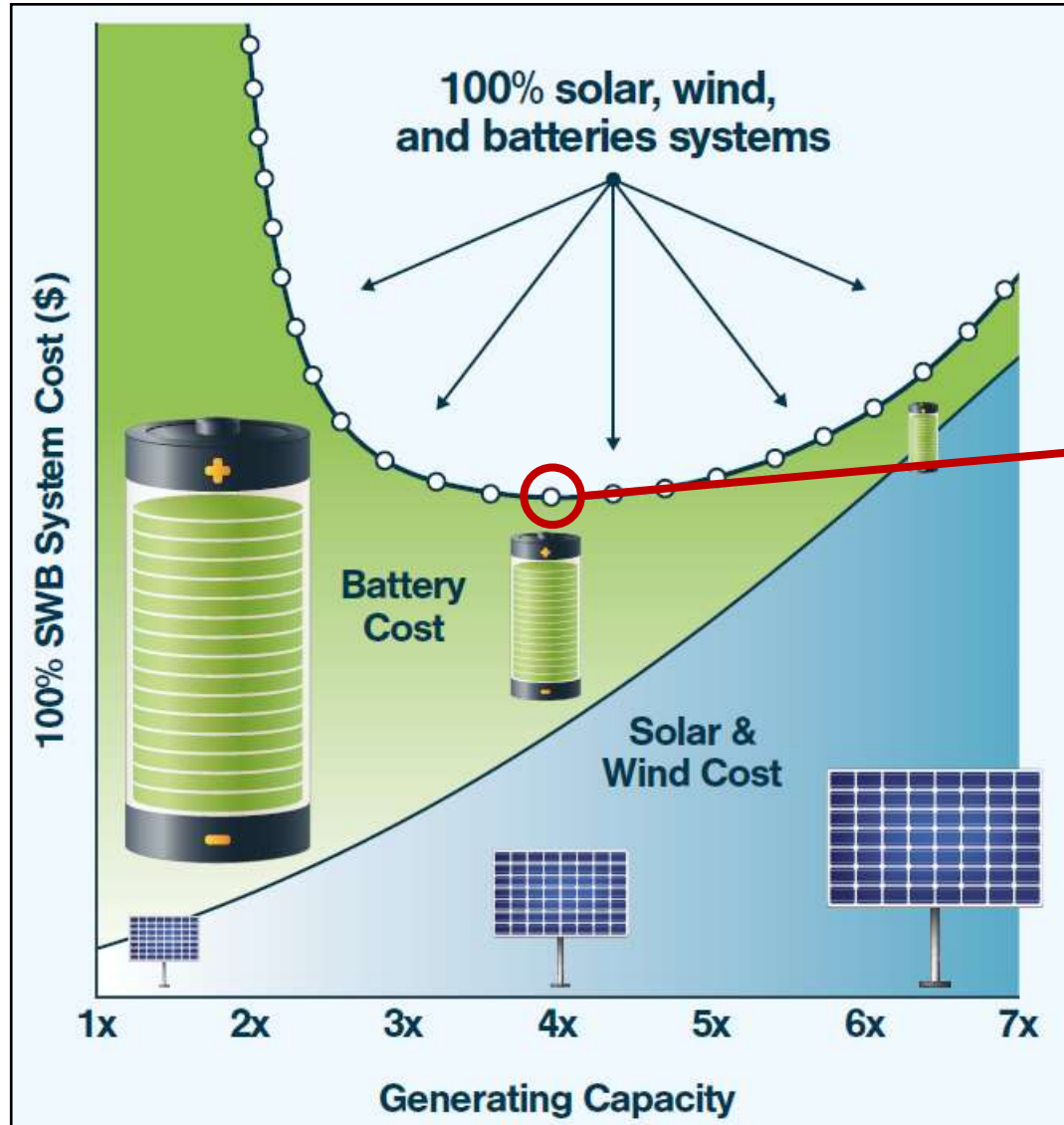
100% renewables energy
from Wind, Water and
Solar (WWS):
The cheaper option

	BAU	WWS
	(¢/kWh)	(¢/kWh)
Cost		
Energy	9.99	8.96
Health	16.9	0
Climate	16.0	0
Total	42.9	8.96

Transition to
100%
renewable
energy
happening



100% Renewable Energy System Cost

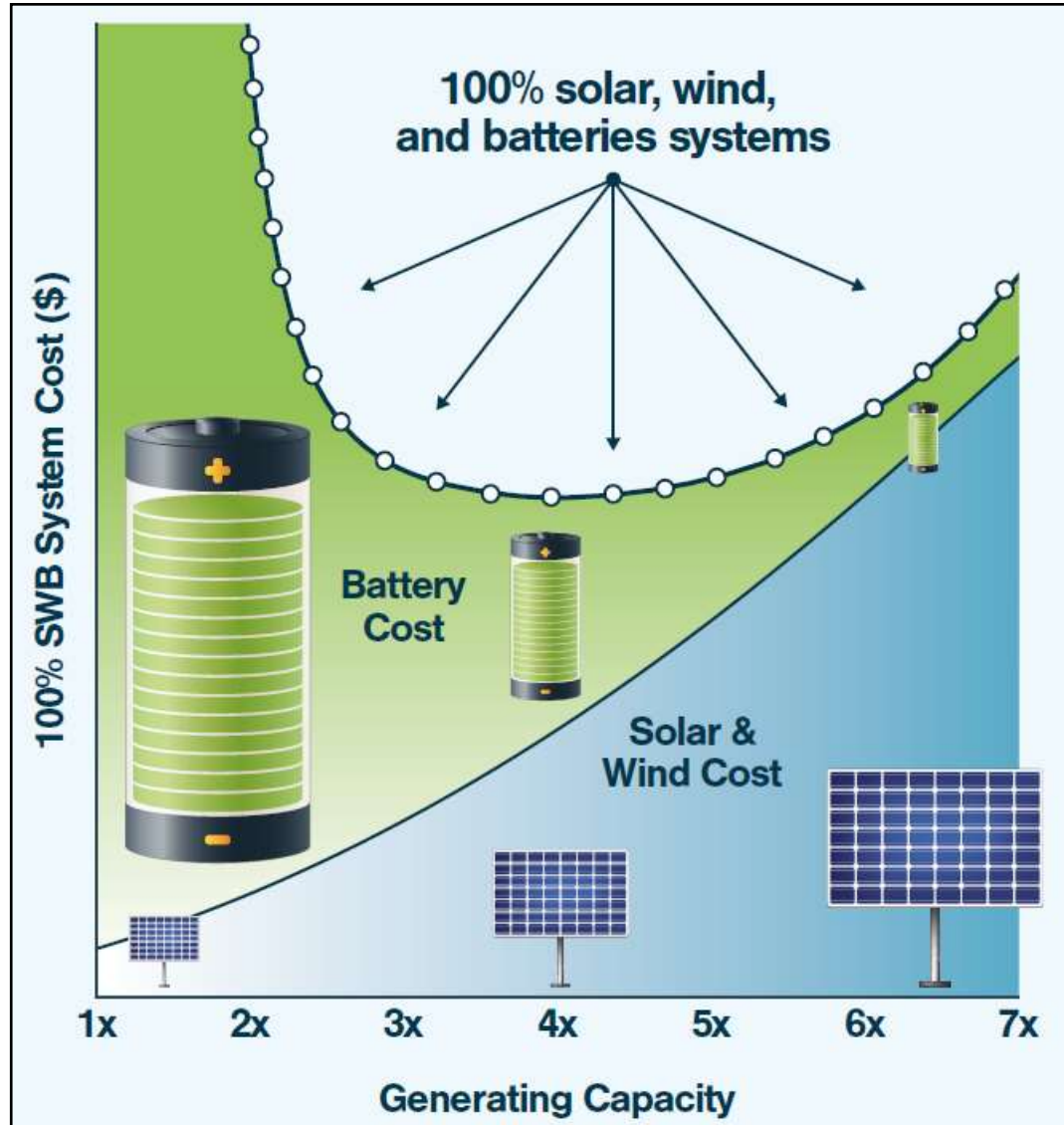


Lowest Cost System

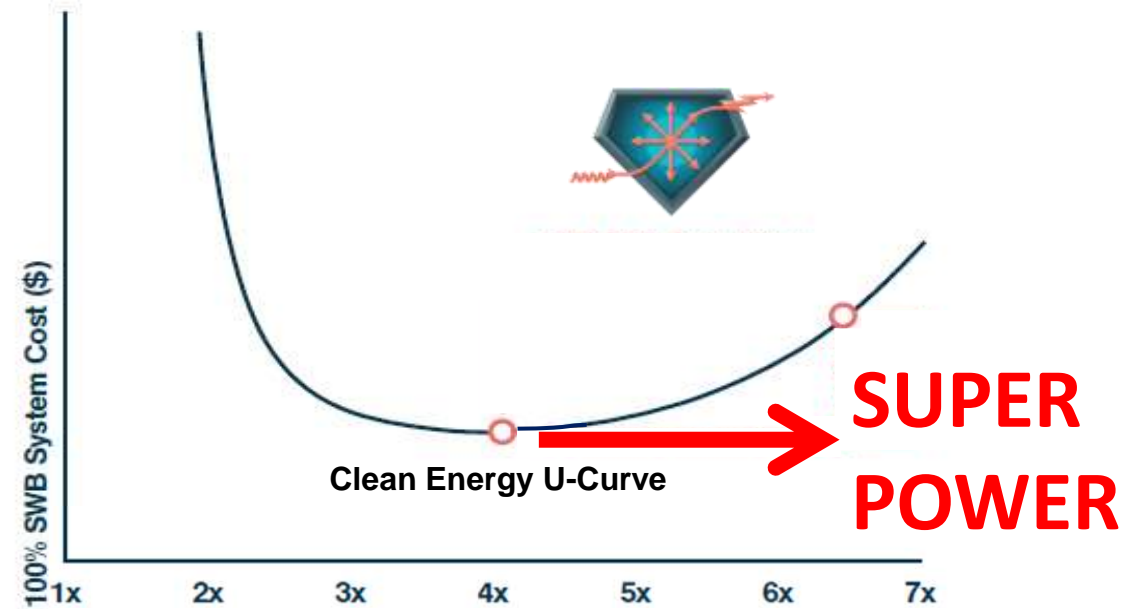
(varies by geography)

- 3x – 5x more generation than existing grid
- 35 – 90 hours worth of battery storage

The "Super Power"



Near-Zero Marginal Cost Surplus Energy

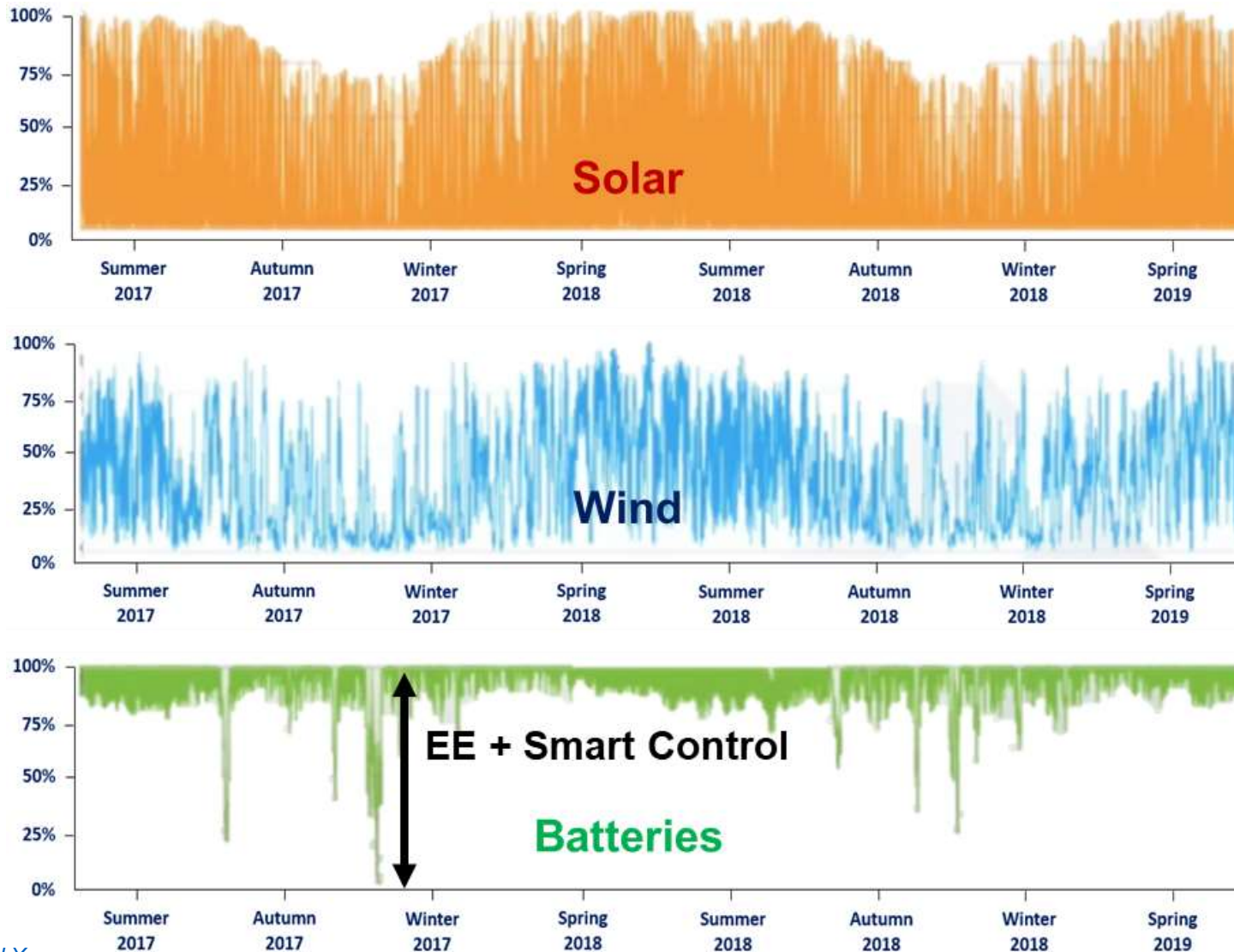


Super Power will create new growth opportunities



Source: [RethinkX](#)

The "Super Power"



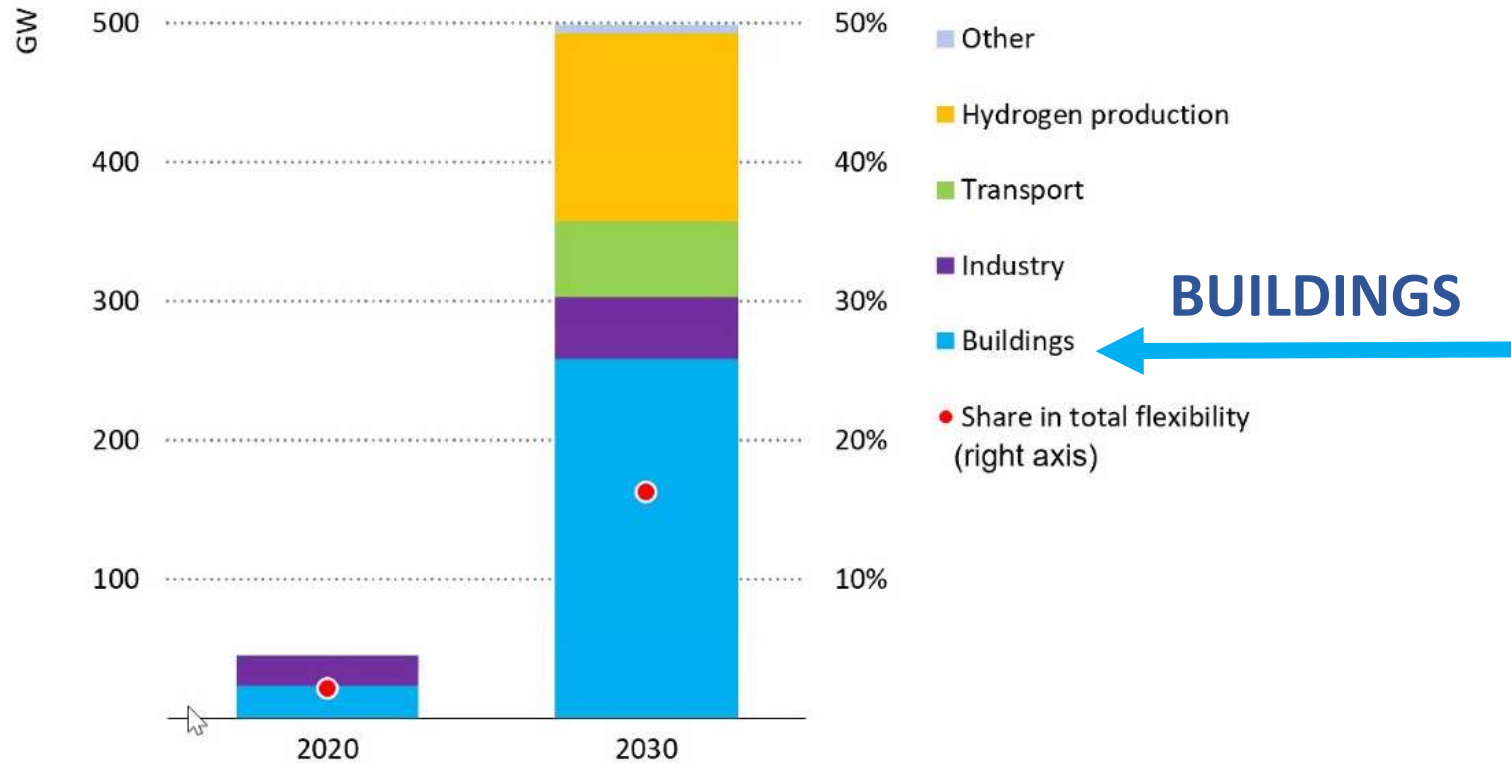
THE PARADIGM SHIFT

Most of the year, there
is an excess of cheap
electricity

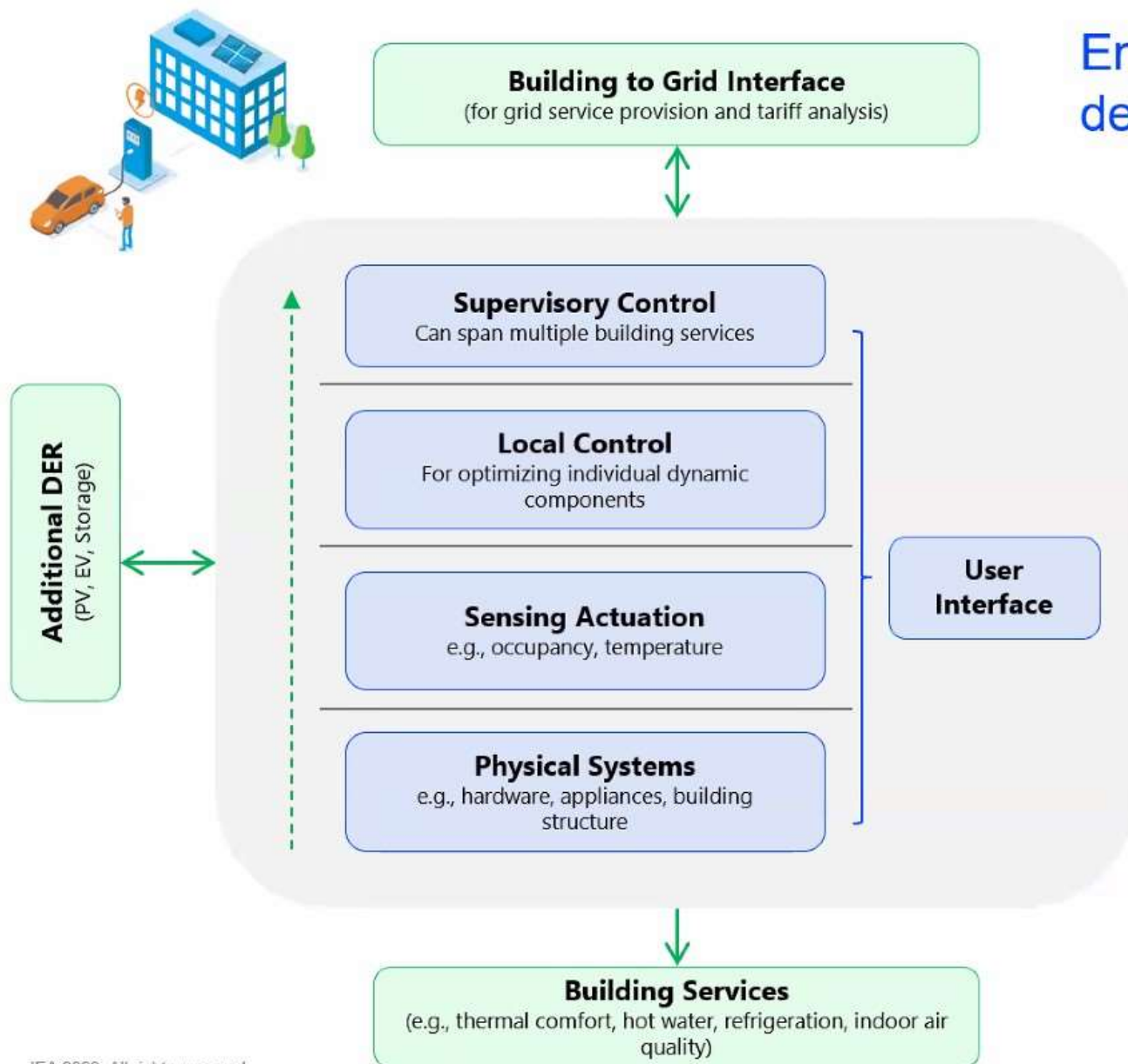
NEW TREND: Buildings as a Battery

Demand-side flexibility is key to reaching net zero

Demand response availability at times of highest flexibility needs and share in total flexibility provision in the Net Zero Scenario, 2020 and 2030



In net-zero scenario, demand-response availability increases tenfold in the next ten years



Ensuring interoperability means taking actions to develop standards and facilitate data exchange

Physical Systems and Sensing Actuation

Many smart thermostats have the capability to provide building-to-grid communication. Some water heaters use a **CTA-2045** communication module to communicate with the grid. Each layer could be embodied with individual technology.

Supervisory Control and Local Control

Grid communication can occur from either local or supervisory control systems. Building Automation Systems (BAS) or Smart Home Energy Management Systems (SHEMS) provide the capability to integrate multiple layers. An example of this is **BAC-net**.

Communication with the Grid

There are some standards to support interoperability between the building and grid communication, for example **OpenADR**, and **IEEE 2030.5** Smart Energy Profile.

Management within the Grid

Supervisory control and data acquisition (SCADA) system and substation automation.

Washington House Bill 1444 States...

An electric storage water heater, if manufactured on or after January 1, 2022, may not be installed, sold, or offered for sale, lease, or rent in the state **unless it complies with the following design requirement:**

- a) The product must have a modular demand response communications port compliant with:
- The March 2018 version of the ANSI/CTA-2045-A communication interface standard, or equivalent and
 - The March 2018 version of the ANSI/CTA-2045-A application layer requirements.”

CTA-2045

ANSI/CTA-2045 specifies a modular communications interface (MCI) to facilitate communications with residential devices for applications such as energy management.

- **This is not a device, but a protocol**
- Makes it possible for appliances to participate collectively in automated demand response



Conclusions

- A combination of stick & carrot necessary + raising of awareness. Continued role for ESG reporting & green building certification
- Using economic tools to “steer” us in the green direction. Making the green choice the natural choice
- Moving towards 100% renewable energy incl. push for energy efficiency
- Grid Interactive Buildings (GIB) become increasingly important and profitable





Suruhanjaya Tenaga Diamond Building

THANK YOU



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