

# Megatrends

reshaping our world

4.2x

AI Power Consumption  
Growth, 2023-2028

10x

More energy  
consumed for a  
ChatGPT query than a  
simple Google search



Energy Transition

2bn

population increase by 2050

+

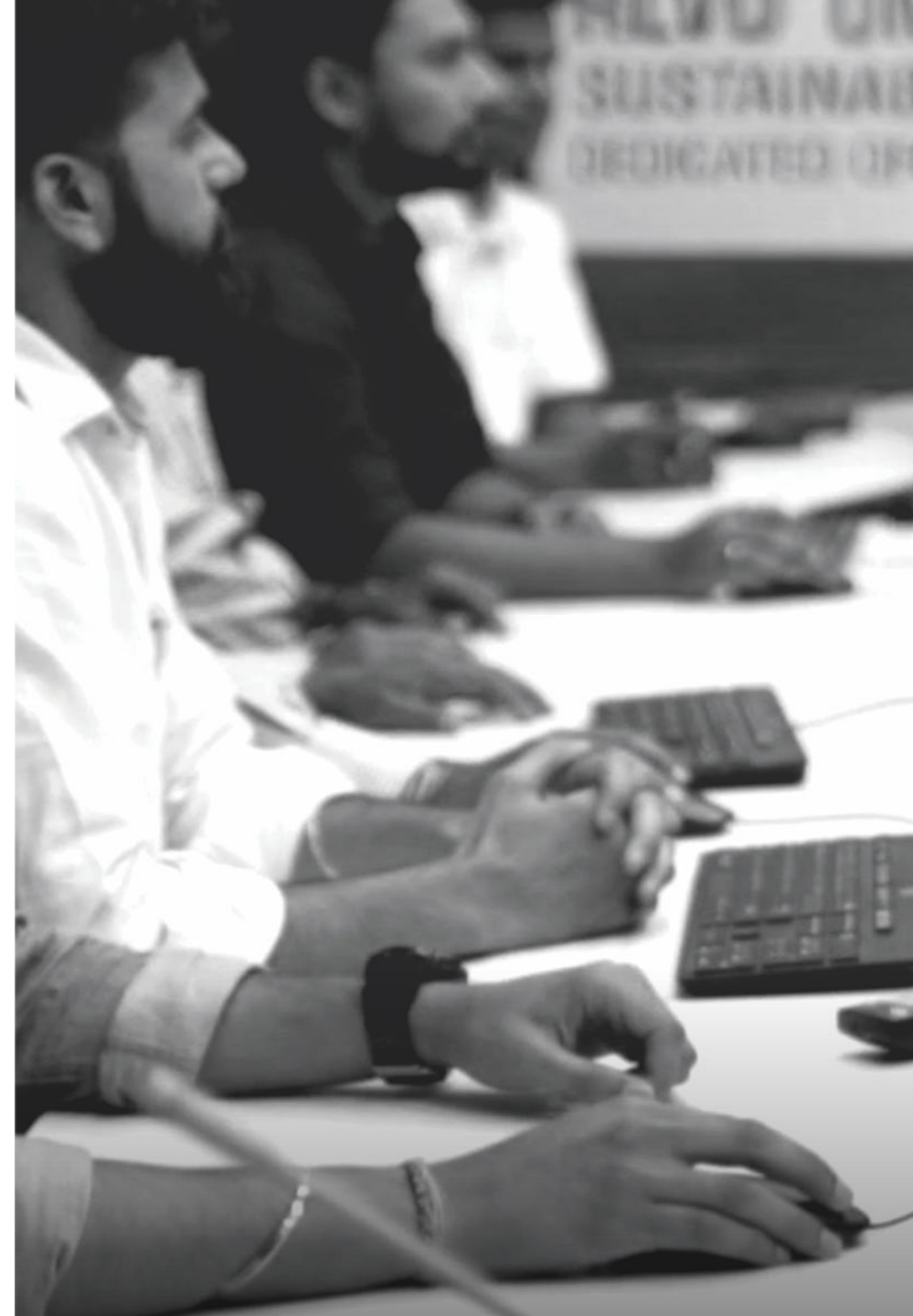
1bn

population without access today

=

3bn

more people needing access to energy by 2050

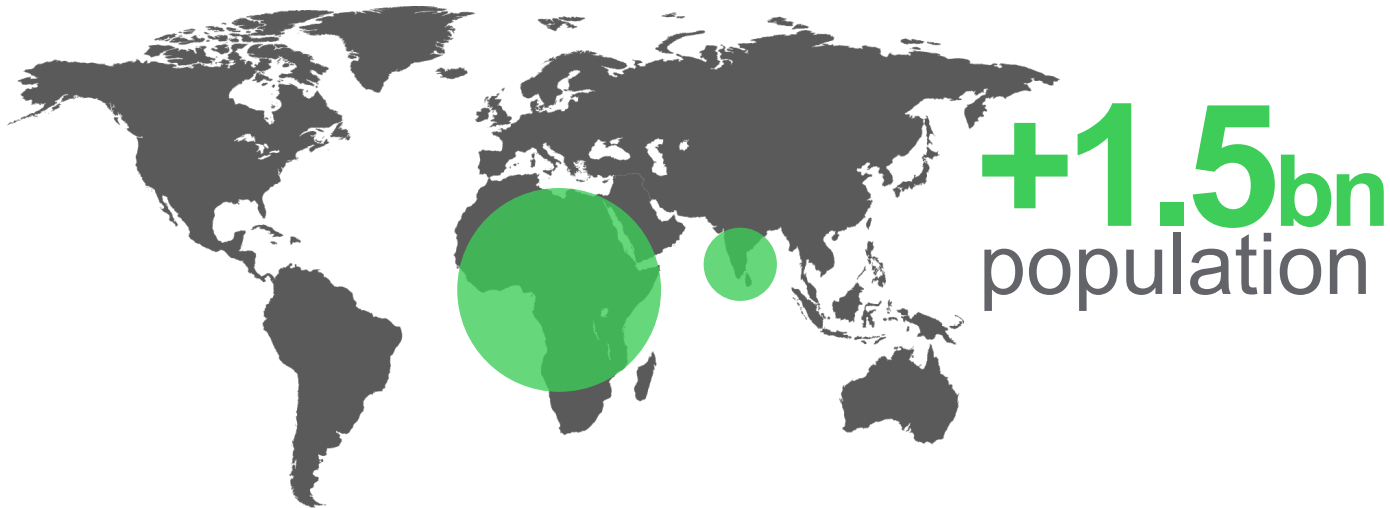


Source: United Nations: [Population](#); IEA, IRENA, UNSD, World Bank, WHO 2024: [Tracking SDG 7: The Energy Progress Report](#)  
| Photo: Navad Raipur, India

Amount of buildings today in **China + EU** to be built in

# India, Middle East & Africa

by 2050



Source: Schneider Electric™ Sustainability Research Institute | Photo: Egyptian Electricity Holding Company, Egypt



# ONE THING IS FOR SURE – WE NEED MORE ENERGY,...

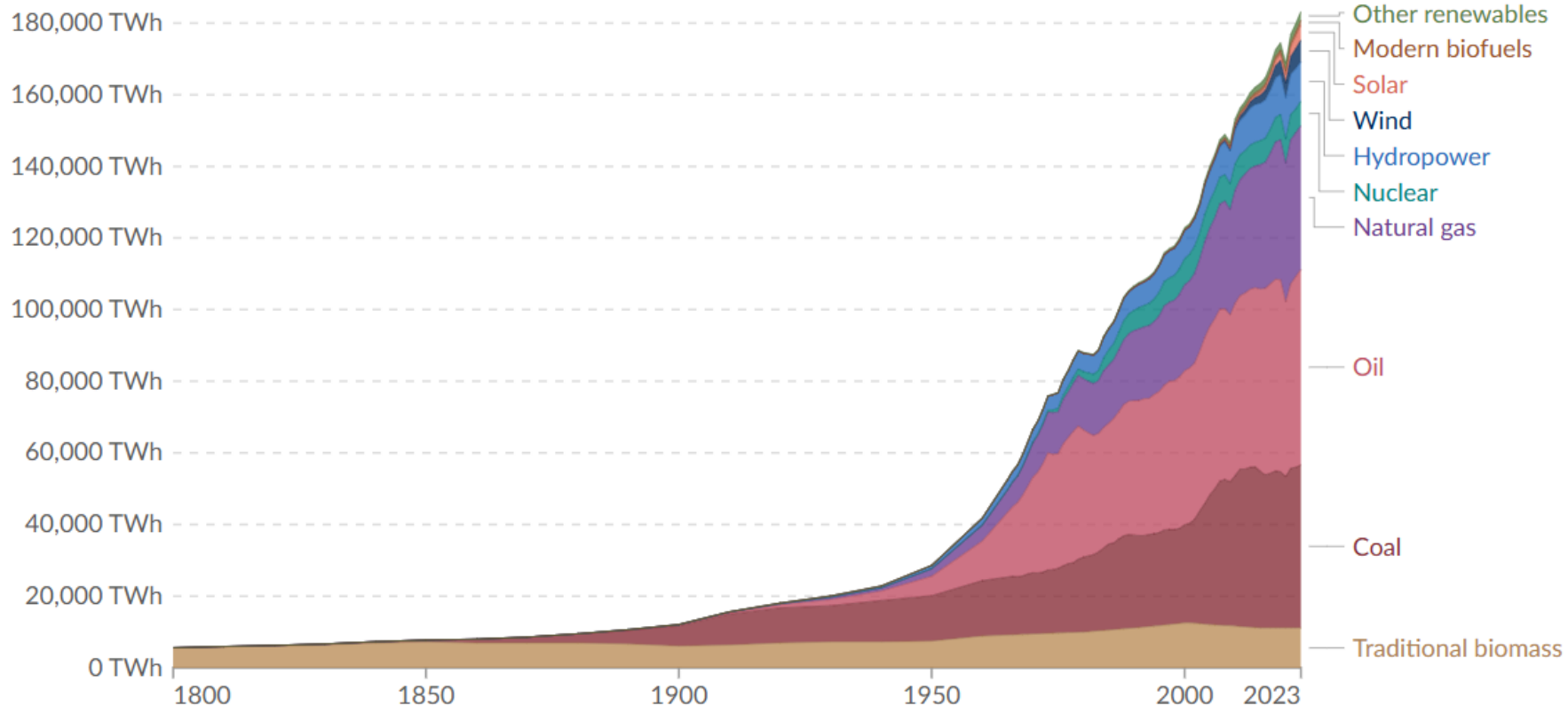
## Global primary energy consumption by source

Primary energy is based on the [substitution method](#) and measured in [terawatt-hours](#).

Our World  
in Data

Table Chart

Settings



Data source: Energy Institute - Statistical Review of World Energy (2024); Smil (2017) - [Learn more about this data](#)

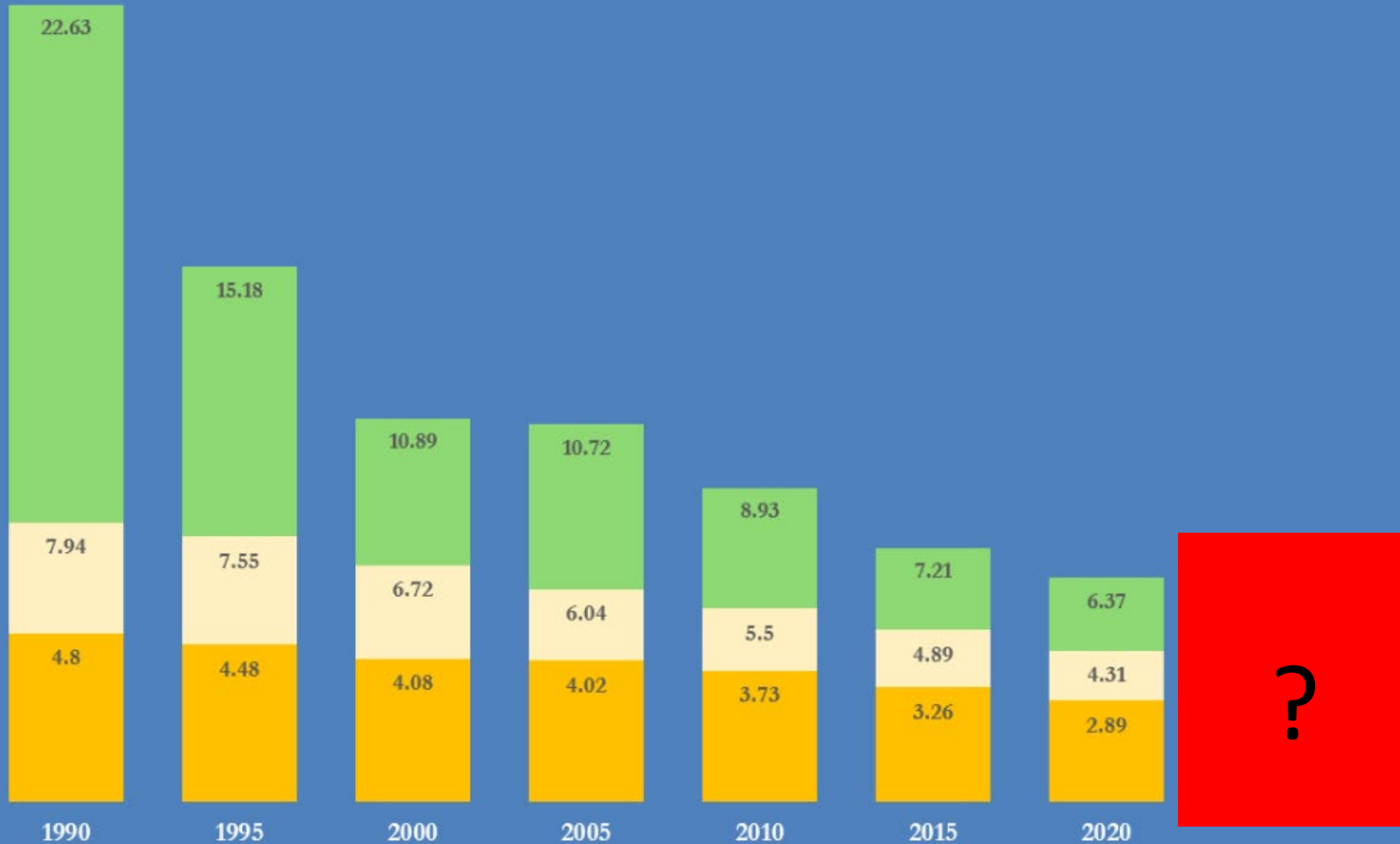
Note: In the absence of more recent data, traditional biomass is assumed constant since 2015.

OurWorldinData.org/energy | CC BY



# ..., WHILE EFFICIENCY MATTER MORE THAN EVER

Energy intensity of GDP, 1990-2020  
megajoules per U.S.\$ (2017) at purchasing power parity



Source: International Energy Agency

@JKempEnergy

# MOL IS AMONG THE INDUSTRY LEADERS IN SUSTAINABILITY

## THE WALL STREET JOURNAL.

MONDAY, NOVEMBER 28, 2016 - VOL. CCLXVII NO. 126 WSJ.com \*\*\*\*\* \$3.00  
 Last week: DJIA 19132.34 ▲ 294.25 1.5% NASDAQ 5199.57 ▲ 118 STOCKS 942.45 ▲ 0.9% 10-YR TREASURY 4.12, yield 2.59% CRB 546.26 ▲ 31.36 EURO 1.0705 YEN 122.22

### What's News

#### Business of Finance

##### Global oil producers

They are preparing for the prospect of a decline in demand by diversifying into petrochemicals, gas and alternative energy. **A1**

Online spending during Thanksgiving weekend grew as the expense of some spending for a second year in a row. **B1**

The U.S. became a net exporter of gas this month, a historical low. The downward energy boom is reshaping the global business. **B1**

United Technologies has held talks with Trump representatives about plans by its Carrier unit to cut 10,000 jobs in Mexico. **A2**

Companies in Germany, Europe's top exporter, are assessing the impact of Trump's win on trade after a presidential campaign. **B1**

Household firms are hard to sell in an uncertain market in the U.S. due to uncertainty over the Chinese firm's new working price. **B4**

U.S. bank stocks have jumped on prospects for an end to the low rate era, which has cut earnings as much as \$20 billion. **B1**

Disney's "Monsters" took in some \$2.1 billion in the Thanksgiving box office, the second best opening ever for the holiday weekend. **B2**

AT&T unveiled its first TV New streaming video service on Monday, offering over 100 live TV channels. **B2**

The WTO is prepared to rule that trading has been granted illegal state-subsidized aid of as low as \$77K per sq ft.

#### World-Wide

Trump alleged that "millions of people" would illegally be admitted as citizens who would be in the world's poorest nations. **A1**

Trump's executive orders are being challenged over the remaining cabinet posts, with leaders challenging over a secretary of state. **A1**

Obama's death is putting pressure on Trump to follow through on his earlier promise to review the cross openings to Cuba made by President Barack Obama.

The New Yorker's legacy is likely to endure for years, to come with the Conservative Party continuing to govern more openly in the 40 states.

Republicans are showing signs of unity over Trump's plan to slash corporate

## Trump Takes Aim at 'Millions' of Votes

As recount efforts are stepped up, president-elect responds with new claims of fraud

By Steve Delaney  
 New York Times Staff Writer

President-elect Donald Trump on Sunday alleged that "millions of people" had voted illegally in the Nov. 8 election, as he responded to reports of efforts and to critics who have

pointed to Hillary Clinton's lead of more than two million votes in the national popular vote. "In addition to winning the Electoral College in a landslide, I won the popular vote if you deduct the millions of people who voted illegally," Mr. Trump tweeted without providing any corroboration for the allegations.

Writing to reassure U.S. citizens, and there is no evidence of widespread voting by illegal immigrants or voters ineligible to vote.

Mr. Trump said in another tweet, "I would have won even more easily and more quickly" if he had not been so busy with the so-called popular vote than the Electoral College in that I would only campaign in 3 or 4 states instead of the 50 states that I've lost. I would have won even more easily and more quickly."

Separately, officials in three states that gave Mr. Trump his margin of victory this month are pushing up for lawsuits in the face of heated pushback from Mr. Trump and his advisers.

The Wisconsin Election Commission will meet Monday to approve a timeline for a recount there after Gov. Scott Walker said he would not support a paperwork-heavy effort. In Pennsylvania, the State Campaign Finance Board is organizing a large organizational battle, with state law requiring supporters to file requests to meet that 4,000 districts across the state by Monday to form a full recount. And the campaign is still making funds for a challenge in Michigan, which may be filed by Wednesday.

The proposed recount in Michigan is significant since the campaign there after Gov. Scott Walker said he would not support a paperwork-heavy effort. In Pennsylvania, the State Campaign Finance Board is organizing a large organizational battle, with state law requiring supporters to file requests to meet that 4,000 districts across the state by Monday to form a full recount. And the campaign is still making funds for a challenge in Michigan, which may be filed by Wednesday.

## Flags Unfurled in Miami as an Era Ends in Cuba



Crowds in Miami, above, turned out Sunday to celebrate the death of former Cuban President Fidel Castro. He died Friday at age 90.

## Castro's Death Dials Up Pressure On Trump to Rethink Cuba Thaw

By Peter J. Brown  
 New York Times Staff Writer

WASHINGTON — The death of Fidel Castro is putting renewed pressure on President-elect Donald Trump to follow through on earlier promises to review the cross openings to Cuba made by President Barack Obama. While Mr. Trump could make Mr. Obama's offers, which were implemented only in a narrow way, he could also push back from his campaign's more deeply ingrained in Cuba under the current administration's policy. These companies include oil, telecommunications and economic freedom.

Mr. Trump's top aides said Sunday that he would demand the release of political prisoners held in Cuba and push the government to allow more

## Oil Firms Anticipate Day of Reckoning

This month, European oil company MOL Group delivered a stark message to investors: Demand for fuel in its key markets is bound to fall.

By Sarah Kent  
 in London and  
 Brian Spegele  
 in Beijing

Peak oil demand—when global consumption crests and begins a permanent decline—is a mind-bending scenario that global producers such as Royal Dutch Shell PLC and state-owned Saudi Aramco are beginning to quietly anticipate. The MOL, a transformation plan that is among the most explicit responses to the trend, indicating how the landscape may change for big energy providers over the next decade.

The Hungarian company is rethinking its traditional focus on fuel supply and shifting investments to petrochemicals, the key ingredients of everyday plastic products and a sector where MOL believes growth will continue even when its fuel business falters.

Although there will still be customers for its fuel, the company predicts demand will soon flatten and then start falling in its European, Chinese and Indian markets around 2030. "We see that as an inevitability," MOL Chief Financial Officer Peter Schmitt said.

Big oil players such as Exxon Mobil Corp. BP PLC and Shell PLC are also rethinking their investment efforts by the Organization of Petroleum Exporting Countries to boost oil prices. "We see that as an inevitability," MOL Chief Financial Officer Peter Schmitt said. "We see that as an inevitability," MOL Chief Financial Officer Peter Schmitt said. "We see that as an inevitability," MOL Chief Financial Officer Peter Schmitt said.

## Oil Firms Anticipate Day of Reckoning

This month, European oil company MOL Group delivered a stark message to investors: Demand for fuel in its key markets is bound to fall.

By Sarah Kent  
 in London and  
 Brian Spegele  
 in Beijing

Peak oil demand—when global consumption crests and begins a permanent decline—is a mind-bending scenario that global producers such as Royal Dutch Shell PLC and state-owned Saudi Aramco are beginning to quietly anticipate. The MOL, a transformation plan that is among the most explicit responses to the trend, indicating how the landscape may change for big energy providers over the next decade.

The Hungarian company is rethinking its traditional focus on fuel supply and shifting investments to petrochemicals, the key ingredient of everyday plastic products and a sector where MOL believes growth will continue even when its fuel business falters.

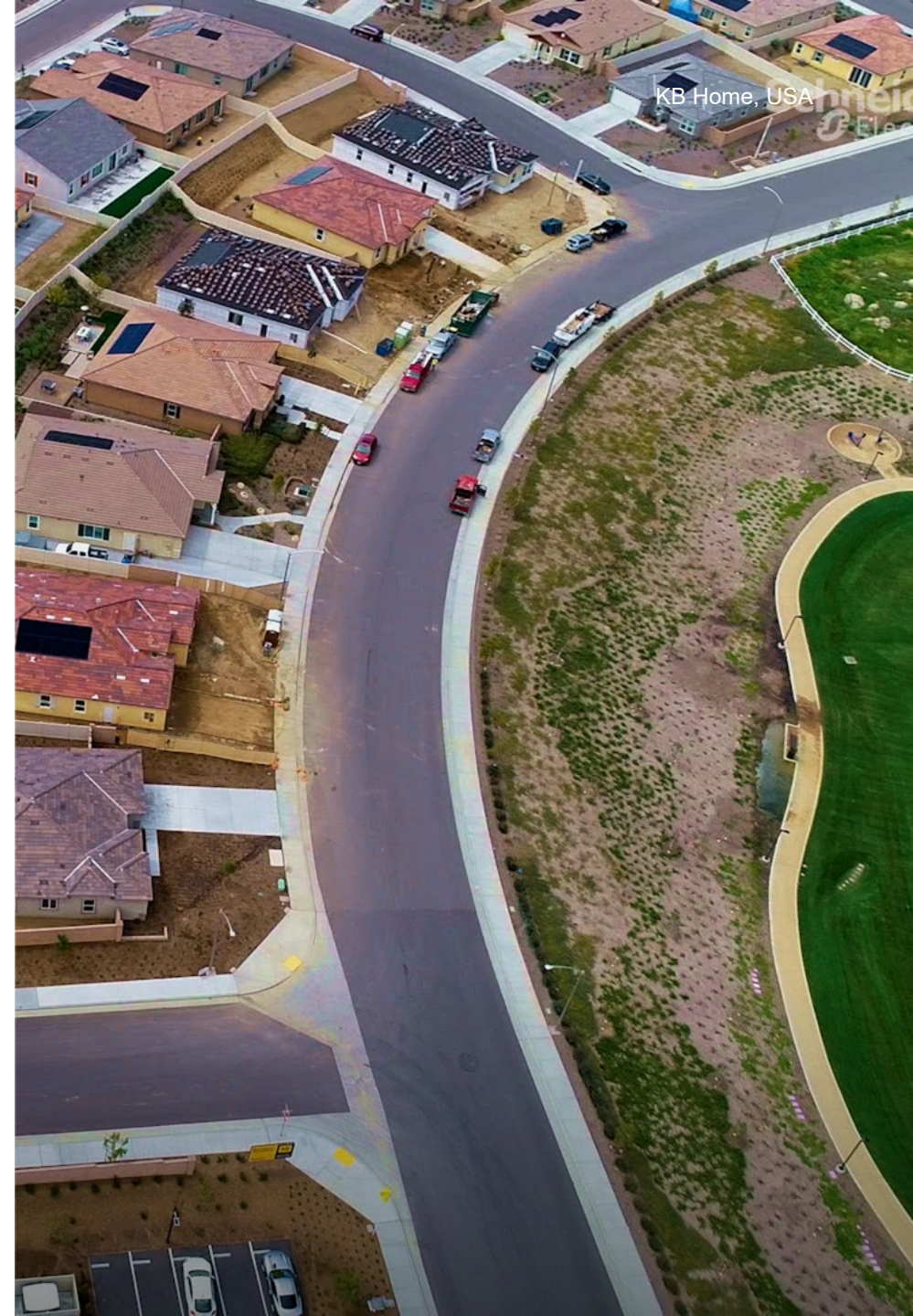
Individuals

Produce  
Consume  
Control

# Prosumers

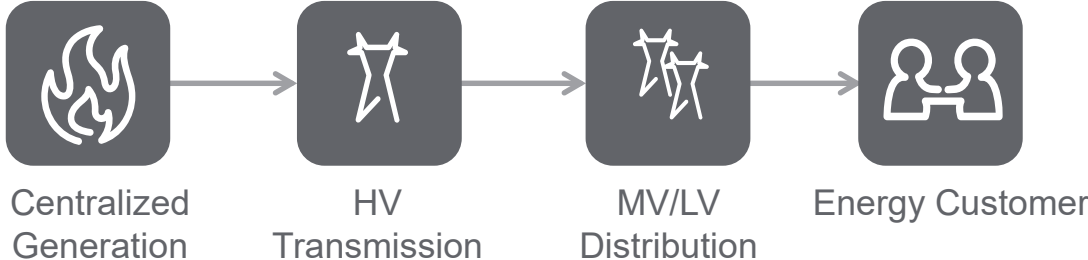
Grid

Reliable  
Flexible  
Green

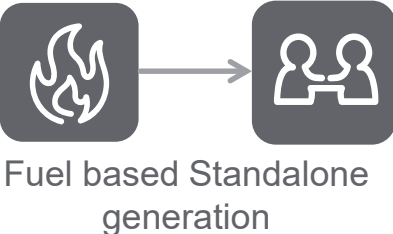


# The new energy landscape

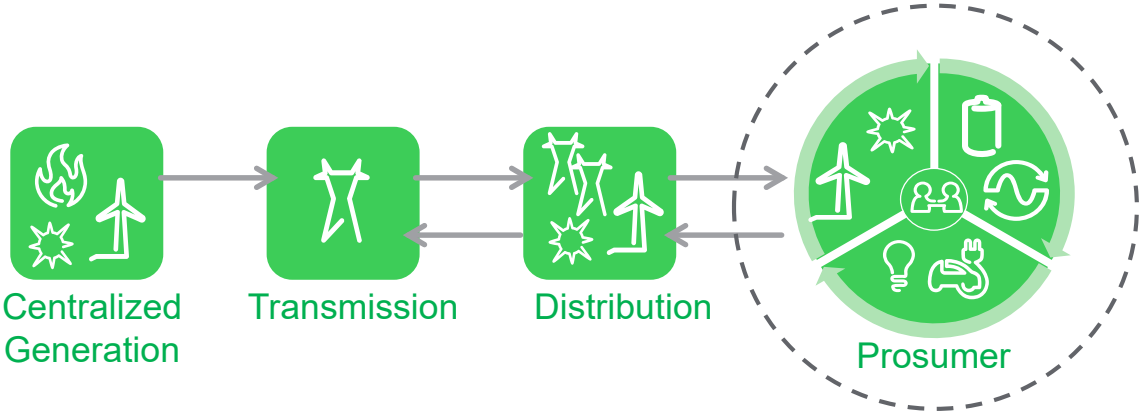
## Historical Energy Value Chain



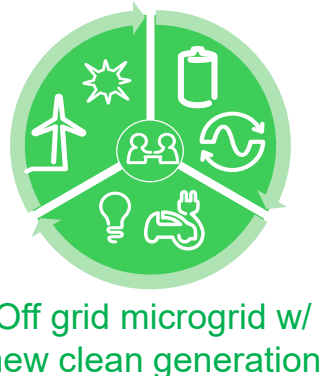
or



## The New Value Chain



or



Decentralized



Flexible



Connected

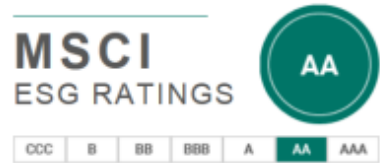
Consumer morphing in prosumer

# WHAT IS GOOD TODAY WILL NOT BE ENOUGH TOMORROW

## ESG: SECTOR-LEADING RATINGS AND DISCLOSURE

### TOP POSITIONS ACROSS LEADING ESG RATINGS

#### INDEXES AND RATINGS



"AA" rating sixth year in a row, staying at the top ~20% among integrated O&G peers



**Climate Change: Management**



'B' rating in Climate Change for the 3<sup>rd</sup> year, above regional peers in several subtopics

**Water Security: Awareness**



**ecovadis**



**Gold Medal (top 5%)**

#### DISCLOSURE

Leading ESG disclosure through Integrated Reporting using the following internationally recognised standards:



**ESG Risk Rating: 28.9** Medium risk



**ESG Risk Management: 70.7** Strong



Qualified to medium risk category in 2024 with management of ESG risks rated strong



# New Energy Landscape in gH2

2

## Utility Grid/Microgrid Connection

- Plant design 3D tools
- Software simulation, optimization, and advanced control
- Medium voltage and low voltage distribution
- Modularization / E-House

1

## Renewable Power Generation

- End-to-end wind and solar power automation and electrification solution
- Net Power Purchase Agreements services (PPA)

Energy Storage  
Above & below ground

Water Treatment

Electrolysis System

3

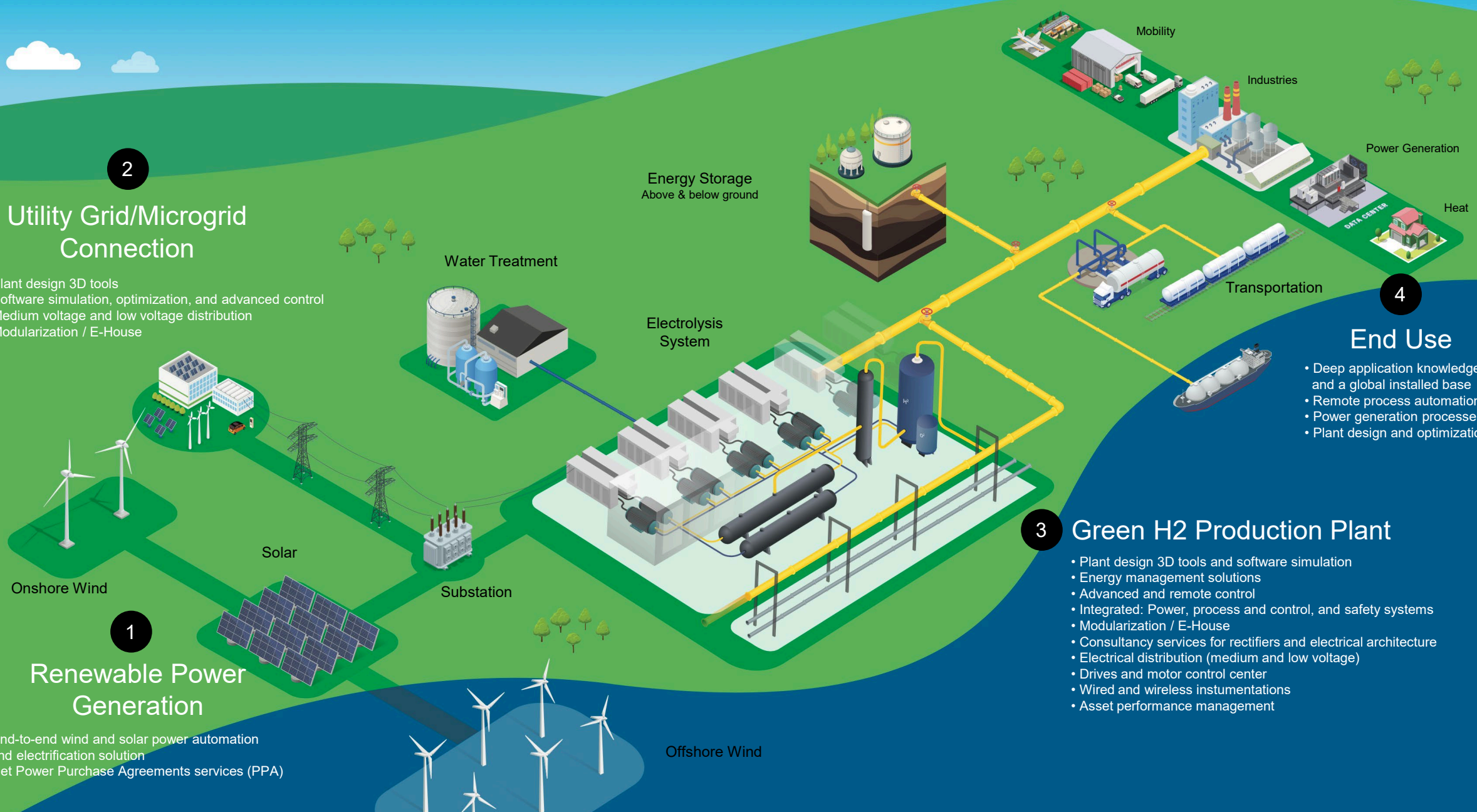
## Green H2 Production Plant

- Plant design 3D tools and software simulation
- Energy management solutions
- Advanced and remote control
- Integrated: Power, process and control, and safety systems
- Modularization / E-House
- Consultancy services for rectifiers and electrical architecture
- Electrical distribution (medium and low voltage)
- Drives and motor control center
- Wired and wireless instrumentations
- Asset performance management

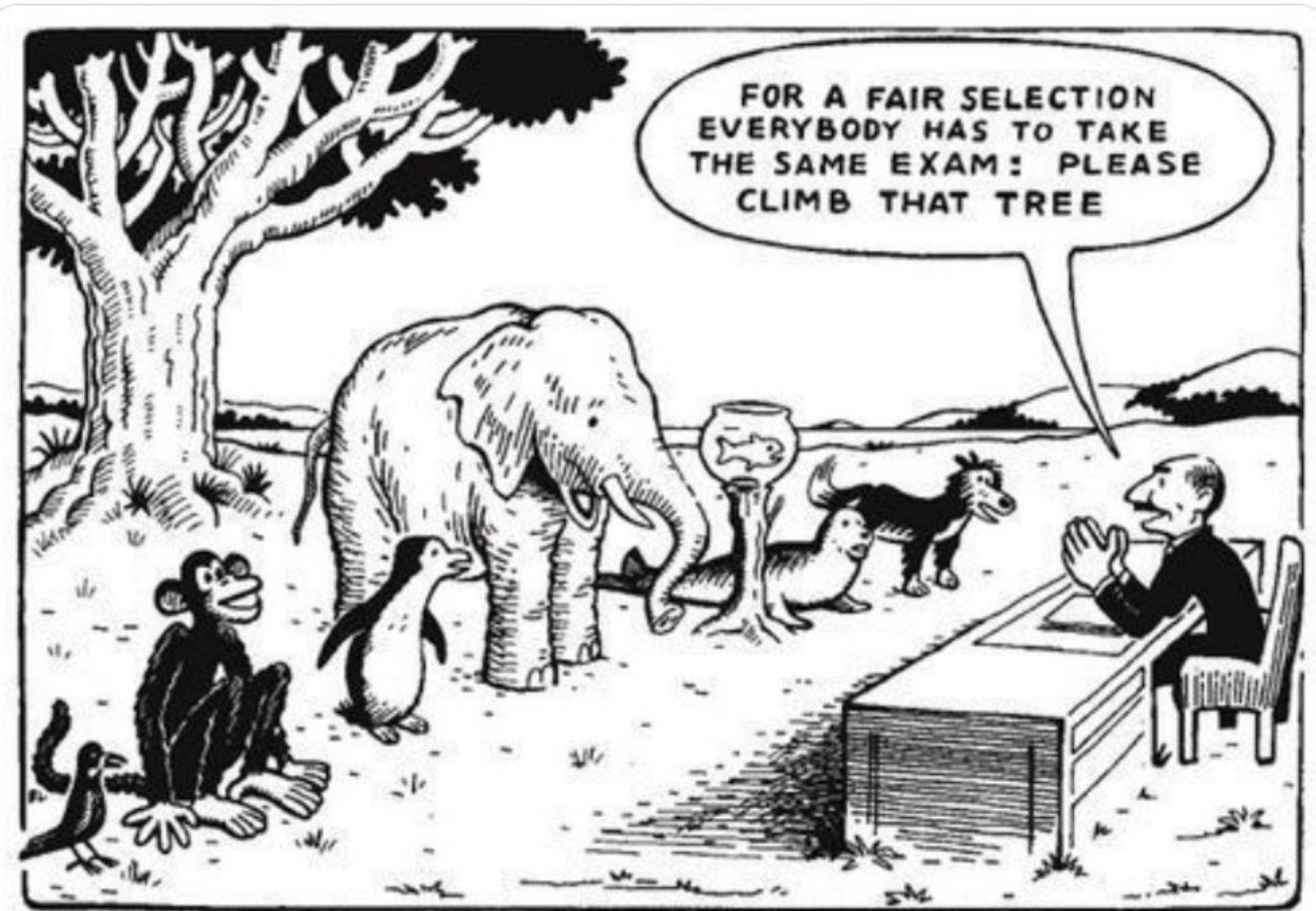
4

## End Use

- Deep application knowledge and a global installed base
- Remote process automation
- Power generation processes
- Plant design and optimization



# FIT4REALITY



Long-term thinking  
requires radical  
collaboration more  
than ever...