



**HOMER**  
Energy

# Microgrids and Hybrid Distributed Generation, It's all about the Economics

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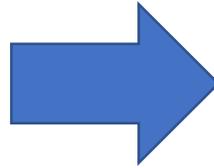
CEO, HOMER Energy

Advanced Energy Conference

NYC, March 27, 2018

# The Future of Power

**HOMER<sup>®</sup> Pro is a platform to accelerate the transition to clean distributed power**



# Too Many Choices

Solar

Fuel Cells

Wind



Hydro

Micro-turbines

Geothermal

Micro-grids

Biomass

Demand Response

New Storage Techs.

Load Management

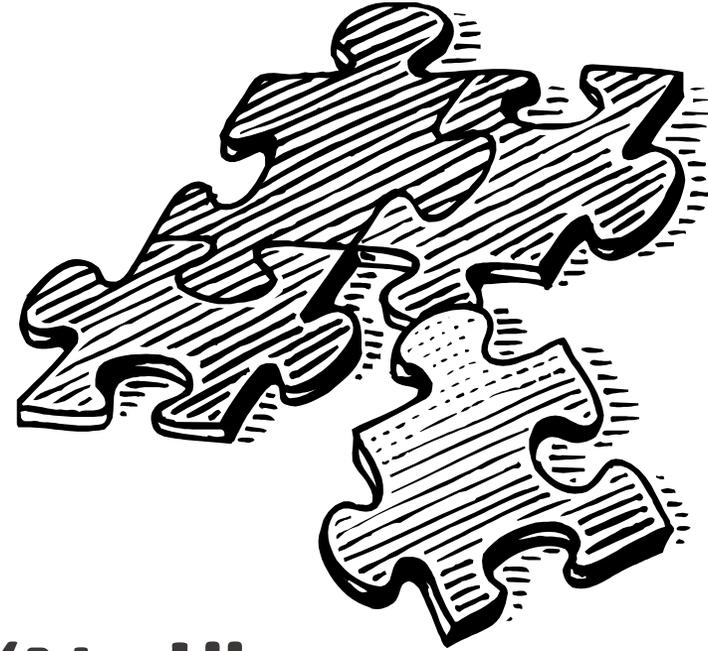
Electric Vehicles

Smart grids

# What is best?

It depends on:

- Resources
- Loads
- Equipment prices
- Equipment performance

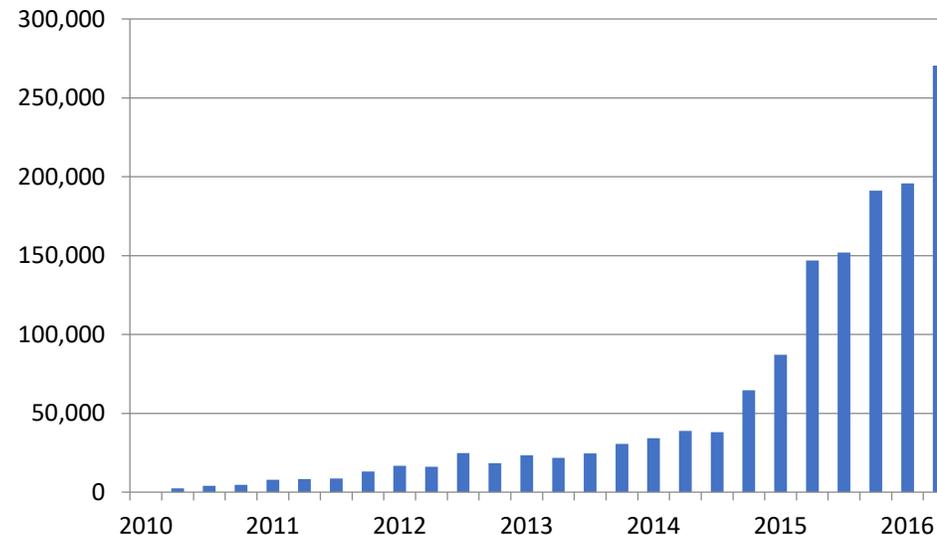
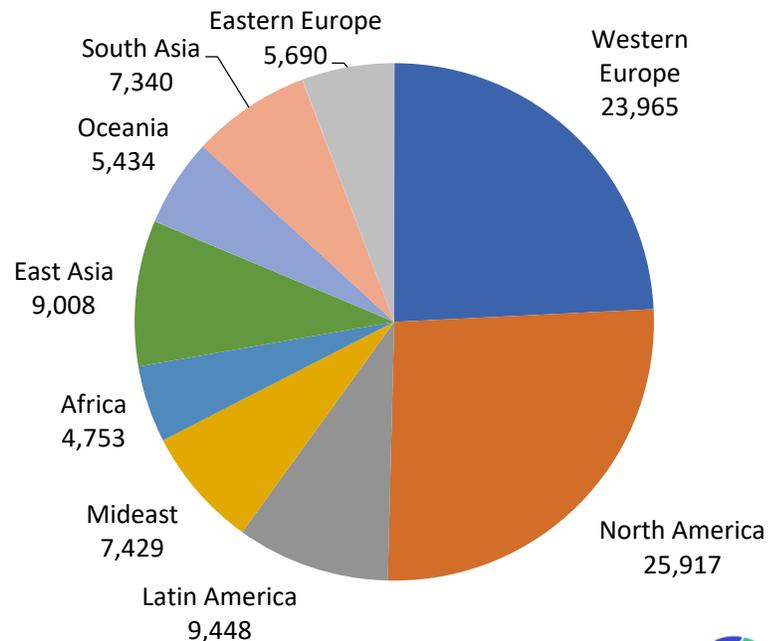


**A confused mind says “No!”**

**HOMER fits the pieces together**

# Who is HOMER?

- NREL: 1992-2008
- 2009 Original developers create HOMER Energy
- 200,000 users in 193 countries
- The **trusted global standard** in economic design analysis



# Three Powerful Tools in One

## Project Inputs



Load Profile

Site-Specific Resources

System Components

# HOMER Energy Products & Services

- Software Products

- HOMER Pro
- HOMER Grid
- QuickStart
- QuickGrid
- APIs
  - SaaS
  - Controller

- Market Intelligence Reports

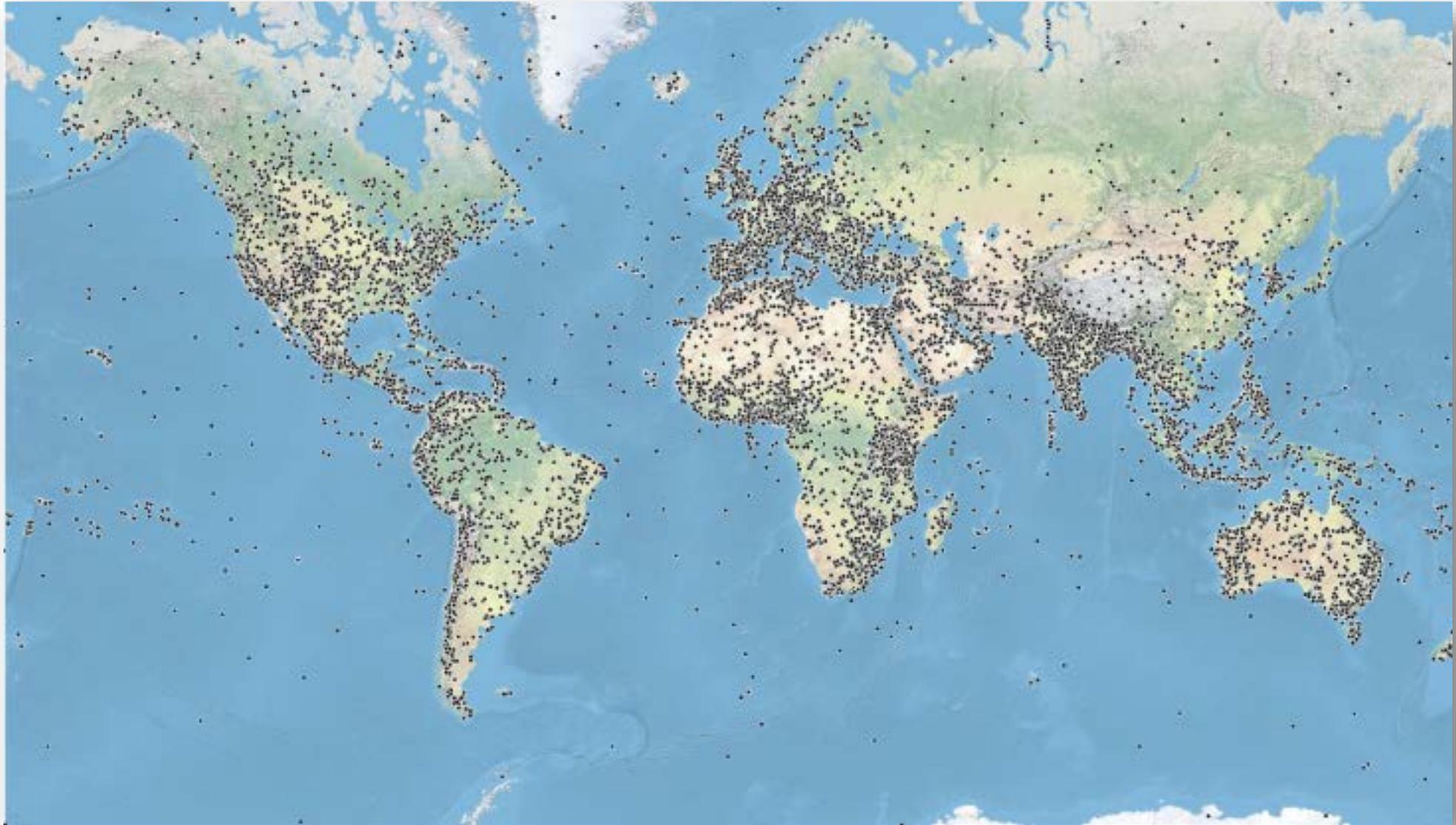
- Services

- Training
- Support
- Consulting

- Market Access

- Newsletter (90,000 opted-in)
- <http://microgridnews.com/>
- Industry Partner Program
- 6<sup>th</sup> Annual HOMER International Microgrid Conference
  - [www.microgridconference.com](http://www.microgridconference.com)
  - San Diego, Oct. 6-8, 2018

# 50,000 microgrids modeled in HOMER<sup>®</sup> Pro



# We Work With...

## Developers



## Component Suppliers



## Education



## Engineering Firms



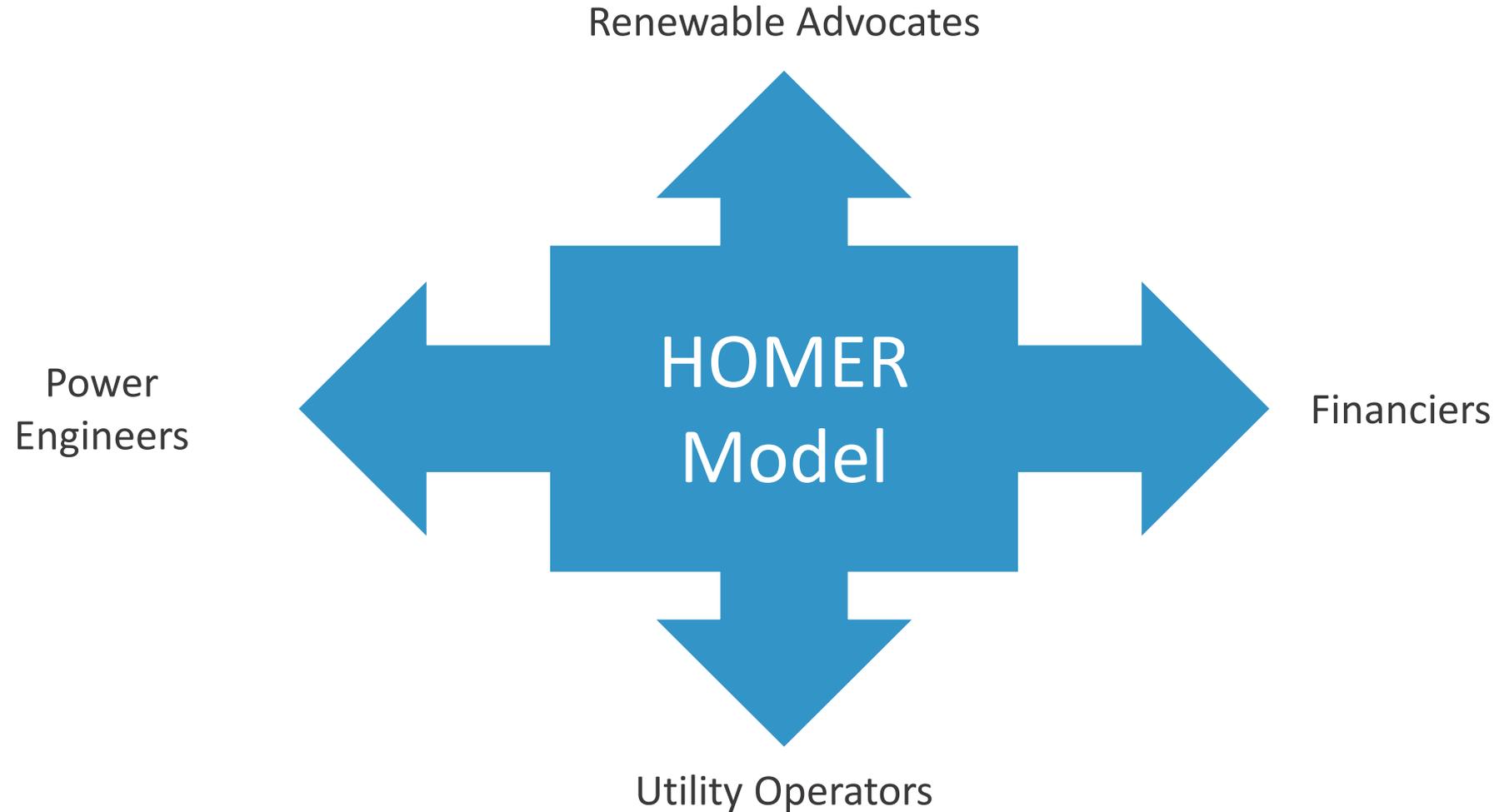
## Government & Financial Institutions



## Utilities



# HOMER Connects the Microgrid World



Software as a communication tool

# Distributed Generation Markets

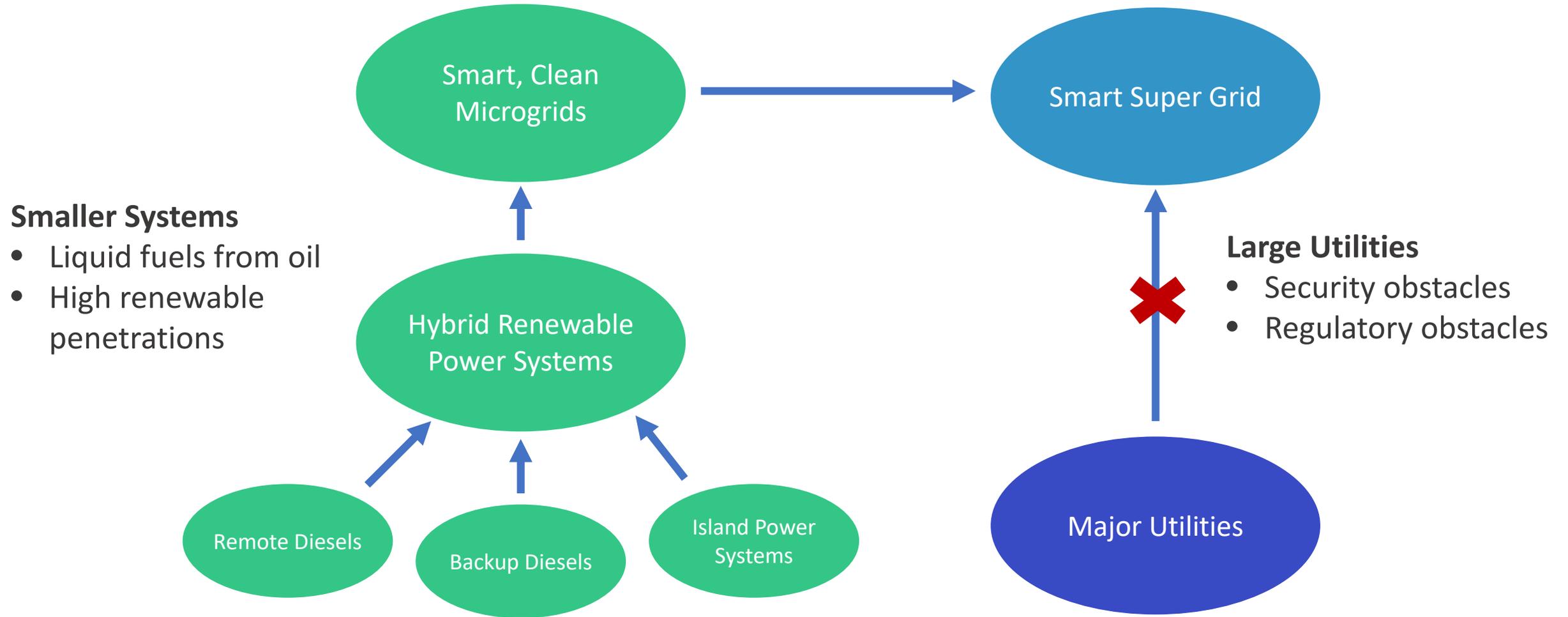
- **General Markets**

- C&I Energy cost reduction
- Renewable integration
- Resilience in developed countries
- Reliability in developing countries
- Islanded utilities
- Energy Access

- **Specific Markets**

- MUSH Campuses
- Military
- Telecommunications
- Mining
- Tourism

# Clean Power Evolution



# Distributed Generation is the future

- **Decentralization**

- Resilience

- **Decarbonization**

- Storage and high penetration renewables

- **Digitalization**

- Optimally control distributed projects

- **Challenge:**

- Reduce soft costs through streamlined development processes