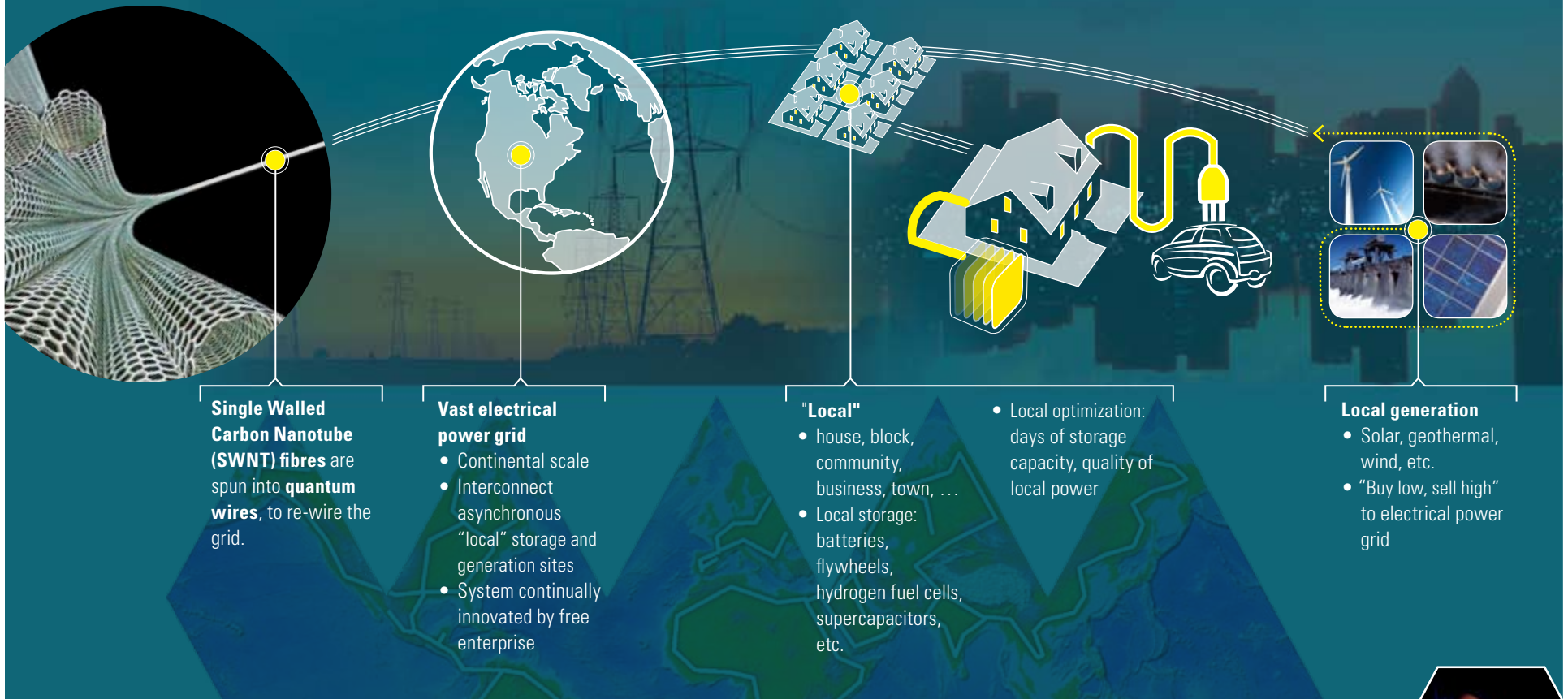


The Distributed Storage-Generation Grid: One World Energy Scheme for 2050



Energy will be transported as electricity over wire, rather than by transport of mass (coal, oil, gas)



Single Walled Carbon Nanotube (SWNT) fibres are spun into **quantum wires**, to re-wire the grid.

Vast electrical power grid

- Continental scale
- Interconnect asynchronous "local" storage and generation sites
- System continually innovated by free enterprise

"Local"

- house, block, community, business, town, ...
- Local storage: batteries, flywheels, hydrogen fuel cells, supercapacitors, etc.
- Local optimization: days of storage capacity, quality of local power

Local generation

- Solar, geothermal, wind, etc.
- "Buy low, sell high" to electrical power grid

THE BENEFITS OF THE QUANTUM WIRE:

Expected Features

- 10x Copper Conductivity
- 6x Lighter
- Stronger Than Steel
- Zero Thermal Expansion

Key Grid Benefits

- Reduced Power Loss
- Low-to-No Sag
- Lightweight
- Higher Current-Carrying Capacity

SWNT Technology Benefits

- Type Specific
- High Purity
- Low Cost
- Scalable Processing

THE WORLD OF THE GRID:

Global grid

- Robust
- Massive primary power input to grid via HV DC lines.
- New input from vast solar farms in deserts,

wind, NIMBY nuclear, clean coal, stranded gas, wave, hydro, biomass, space-based solar... "Everybody Plays"

- Ethanol / Methanol / Hydrogen are transportation fuels
- Transition technology – Plug-in Hybrids

Rick Smalley's vision of a global energy network.



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