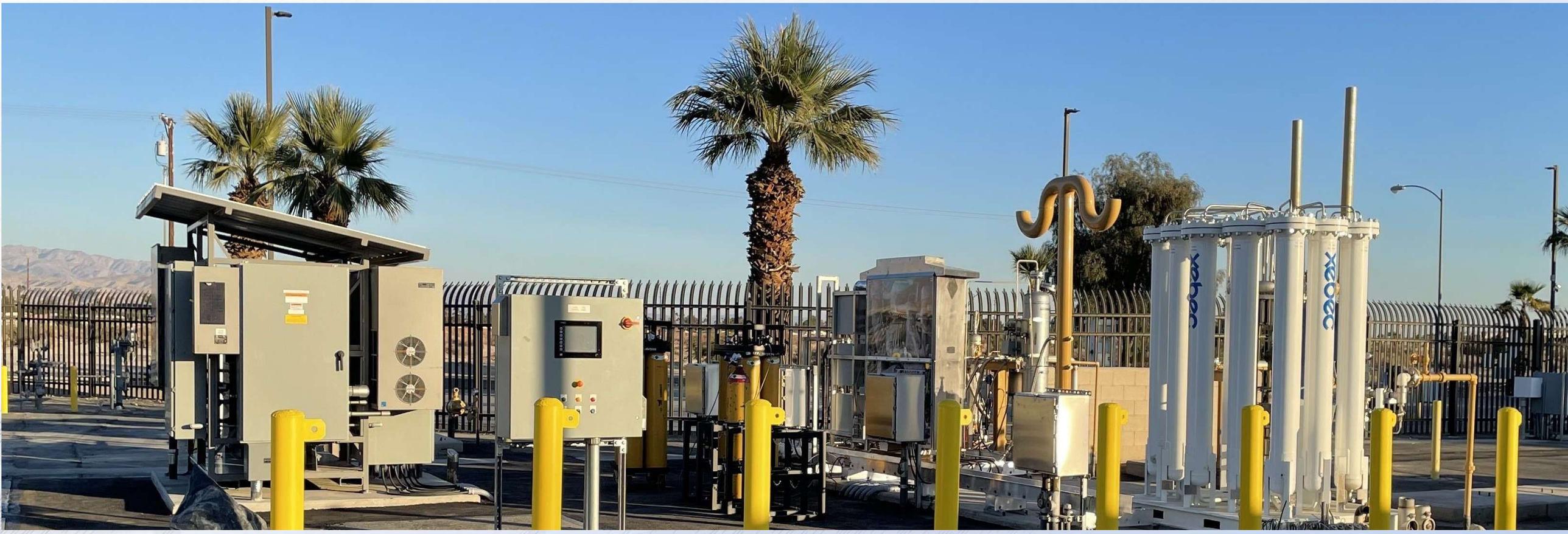
STARS
Technology Corporation

No One Saves the World Unless Someone Makes $$

Engineers Solve Economic Problems



Pilot Tested, Disruptive Technologies Resolves the Dilemma of –
Which Comes First – Capability or Demand – They Happen Together with Distributed Systems

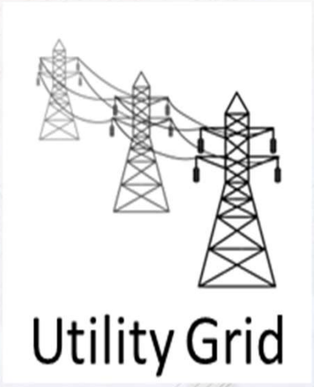
The Energy Challenge: Reliability, Speed, and Decarbonization

Demand is rising. The grid is strained. Clean power must be reliable

- Customers need rapidly deployable clean, dispatchable, on-site power
- Grid congestion & long connection queues, hinder new data center development
- Electrification is accelerating across transportation, energy, and industry
- Renewables are abundant but not aligned with grid needs
- Electrically Heated SMR H_2 multiplies grid power **ONSITE**

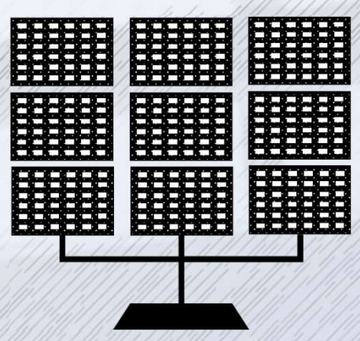
Three Data Center Energy Challenges that Distributed Microgrids Resolve

AI is overwhelming the power system



- **Generation**
  - A New Generation Approach is Needed
    - Central Production Takes Years to License, design and build
  - Distributed Energy Production reduces risks, timelines and costs
- **Transmission**
  - New Right of Way: $1M – $11M per Mile
  - Reconductoring: $300K – $1,100K per Mile*
- **Distribution**
  - $100K – $800K per Mile

*Illinois Power Agency



Cost/Mile of New Electrical Power Transmission

Item	Low	Average	High	Notes
Per-mile cost (overhead, 138–345 kV)	$700,000	$1,400,000	$3,000,000	Includes towers, conductors, wiring, insulators, and basic foundations
Right-of-way (ROW) acquisition	$200,000	$1,000,000	$3,000,000	Varies with land use, eminent domain, and easements
Permits, interconnection, and studies	$100,000	$500,000	$2,000,000	Environmental, cultural, and system studies required
Land surveys, materials, and routing	$150,000	$600,000	$2,000,000	Includes planning and route optimization
Delivery/installation and commissioning	$50,000	$250,000	$1,000,000	Site mobilization, testing, and integration with grid
Total $/Mile =	**$1,200,000**	**$3,750,000**	**$11,000,000**	**$1M – $3.5M/Mile for H2 Pipelines**

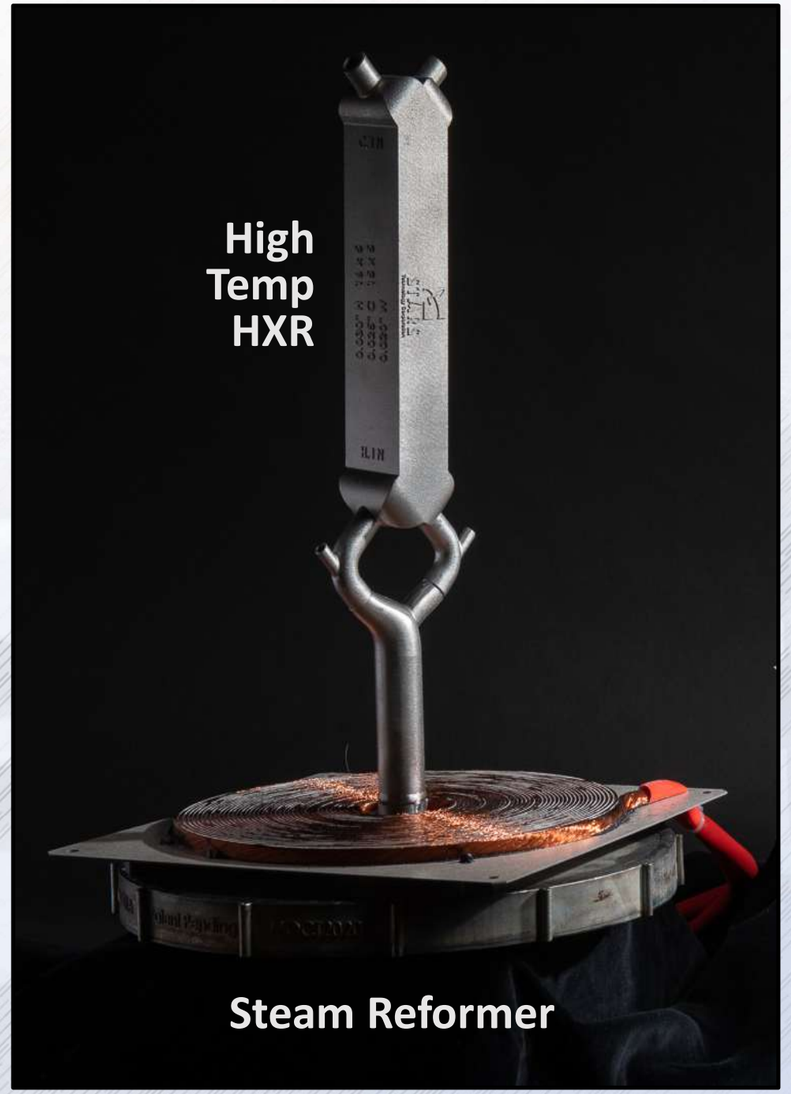
Time-Line & Cost Comparison of Energy Alternatives
Sooner is Better than Later – Less is Better than More

Comparison of Energy Alternative Time Lines (Months)			
Energy Approach	**Engineer, License & Permit**	**Procure, Construct & Commission**	**Total**
Nuclear (1000 – 1200 MW)	84 – 120	54 – 96	138 – 216
Natural Gas (500 – 800 MW)	30 – 54	21 – 36	51 – 90
Microgrids (10 – 20 MW)	6 – 18	9 – 21	15 - 39

Energy Behind-the-Meter Costs	
Energy Source	$/kWh
Solar + Battery Microgrid	$0.12–$0.18
STARS' **Hydrogen Enabled Microgrids**	**$0.10 - $0.20**
Diesel-hybrid microgrids:	$0.25 –$0.40
Nuclear	$0.12 - $0.18
Natural Gas Combined Cycle	**$0.07 - $0.12**

Core Microchannel Process Technology

Chemical Process "Chips" – Computer Chip Analogy



Steam Reformer

Compact, Process-Intensive

Microchannel Reactors & Heat Exchangers: Unbeatable heat transfer and reaction rates, chemical conversions and process modulation

Highly-Efficient, With Induction Heating

Reduces CH_4 consumption and CO_2 production; World-Record electrical-to-chemical energy efficiency

Low-Cost Hardware Mass Production

3D printing with assembly-line fabrication enables economies of hardware mass production

Patented and Patents Pending

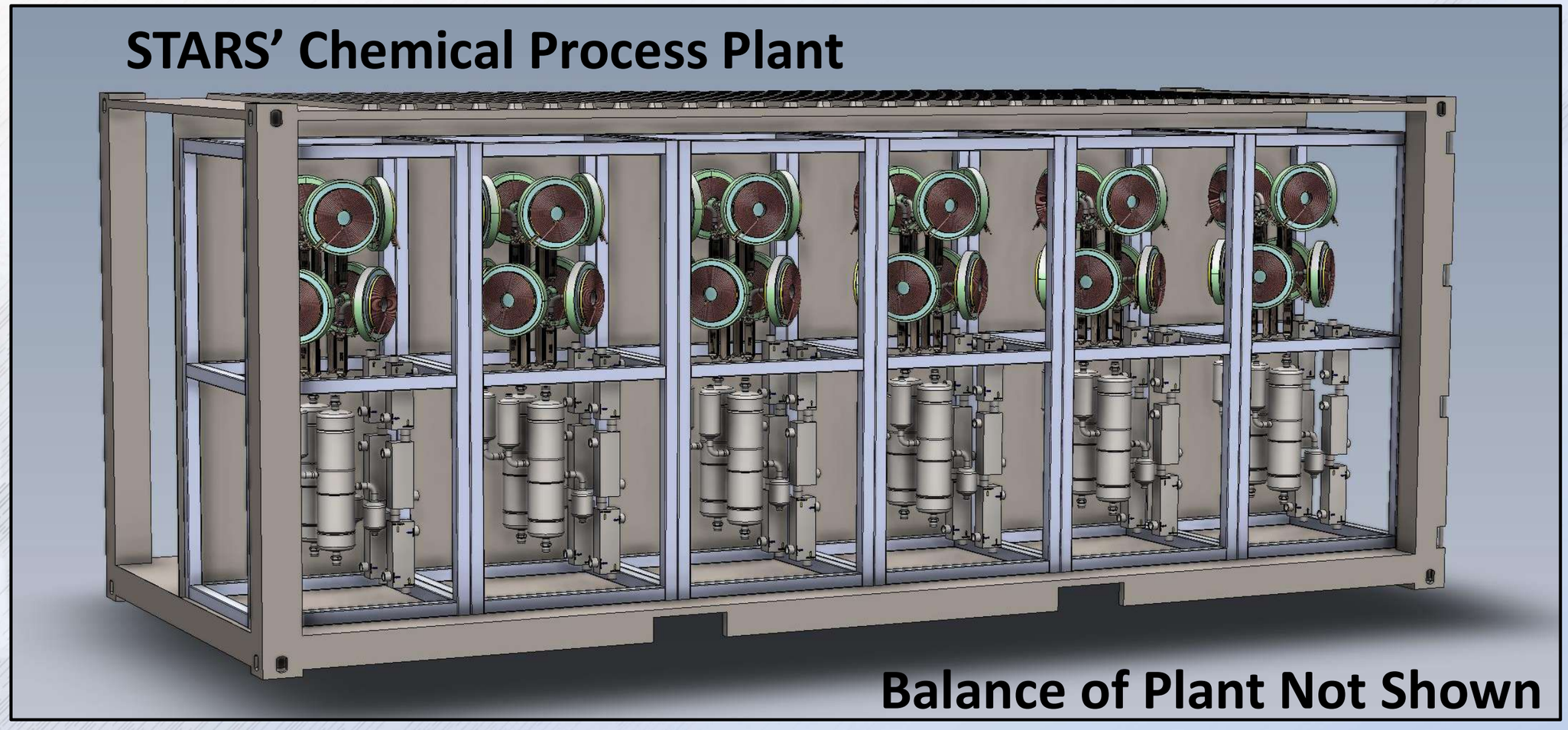
Global protection

Five Years Ahead of Anything Else

STARS' Planned Commercial Product – 1500 kg H_2/day

Six Mass-Produced Reaction Modules

Producing 250 kg H_2/day each in an 8' x 20' ISO Shipping Container



SMR Enabled, Fully Integrated H_2 Microgrids

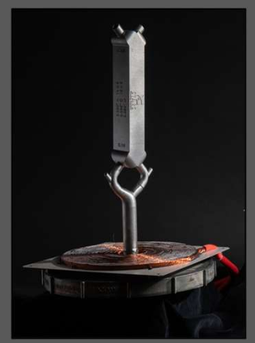
Multiple Purposes

Amplifies – Stabilizes the Grid

Enables Rapid Roll-out of AI Data Centers

RNG/NG

Gas Grid Injection



STARS Steam-Methane Reforming

H_2

Storage

H_2

Hydrogen for Fleet Mobility

Fuel Cell + Battery

Power for Data Centers

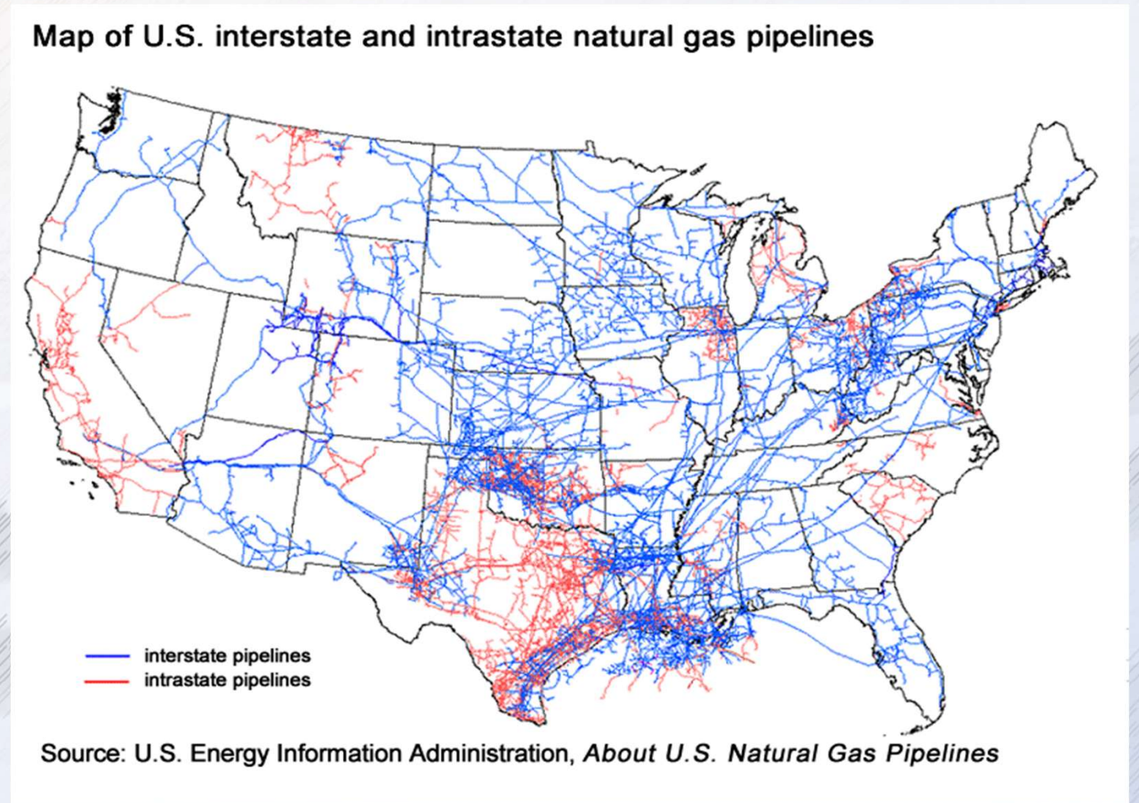
Utility Grid

Electrical Grid Support

Renewable Energy

Alternate Grid Power to Data Center

Partnering with the Natural Gas Grid makes clean hydrogen possible today in every state



Gas industry Strengths/Value

- $ Billions invested in Infrastructure
- Cost recovery across customer base
- Hazard management expertise
- Customer base includes large energy users
- Skin in the game – natural monopoly

The natural gas companies have vested interest in the hydrogen energy economy

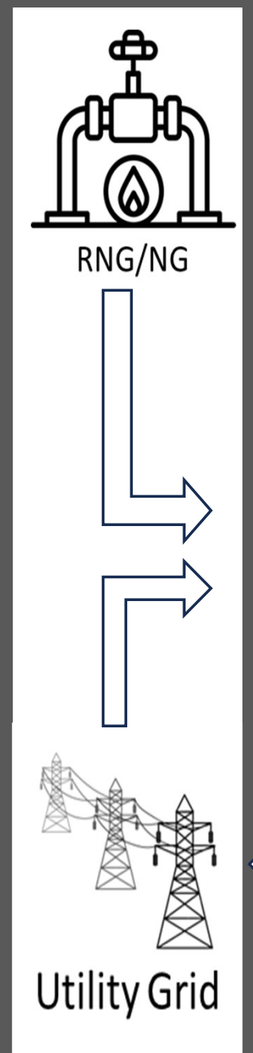
SMR Enabled, Microgrid Stabilizes Grid Using Renewables

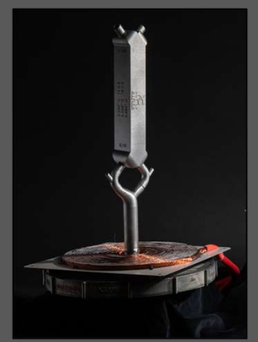
Hydrogen turns renewables and microgrids into 24/7 power systems

Converts excess solar/wind into hydrogen for long-duration storage

Reduces curtailment and increases renewable to the grid

Microgrid Amplifies (2.5X) – Load shifts renewable energy to peak-value hours – Provides utility grid-stabilizing services





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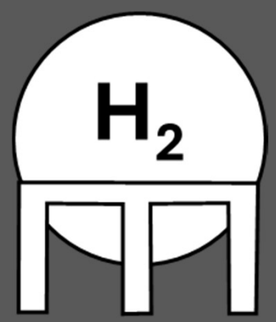
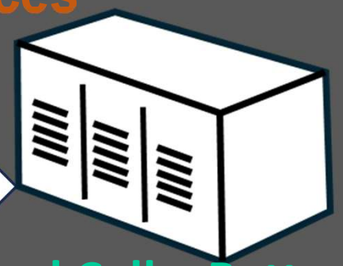
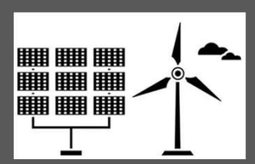


Storage



Fuel Cell + Battery



Renewable Energy

Electrical Grid Support

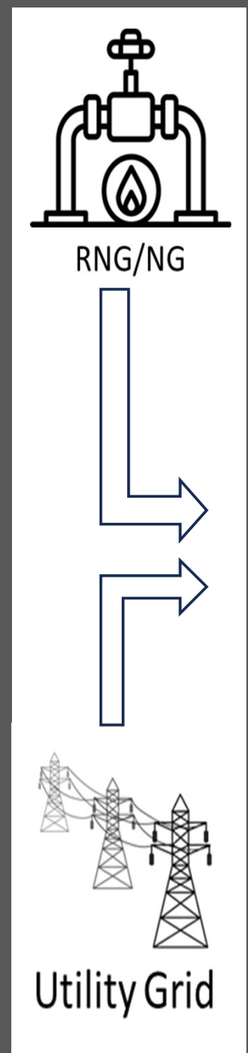
SMR Enabled, H2 Powered Microgrid for AI Data Centers

H2 + fuel cells provide clean primary or backup power

Rapid Deployment, High Reliability, minimum grid impacts

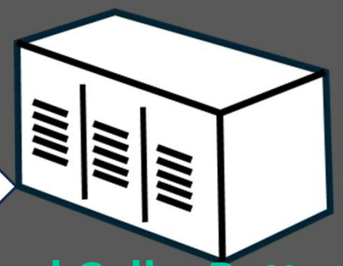
Extends Renewable Production - up to 2.5X with hydrogen storage

Bidirectional power flow enables microgrid operation and utility grid-stabilizing services

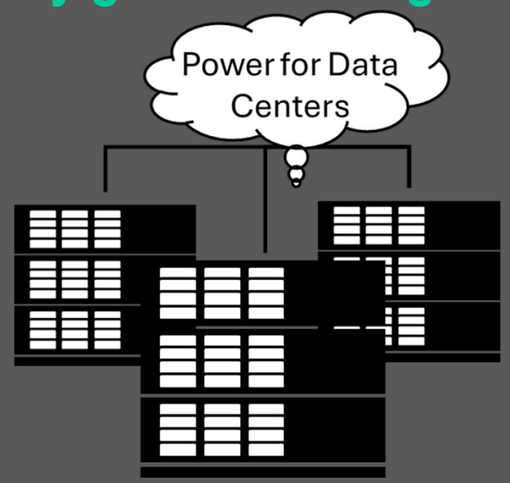


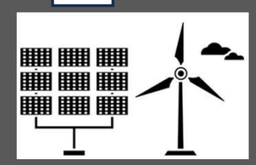
STARS Steam-Methane Reforming

Storage



Fuel Cell + Battery





Renewable Energy

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Alternate Grid Power to Data Center

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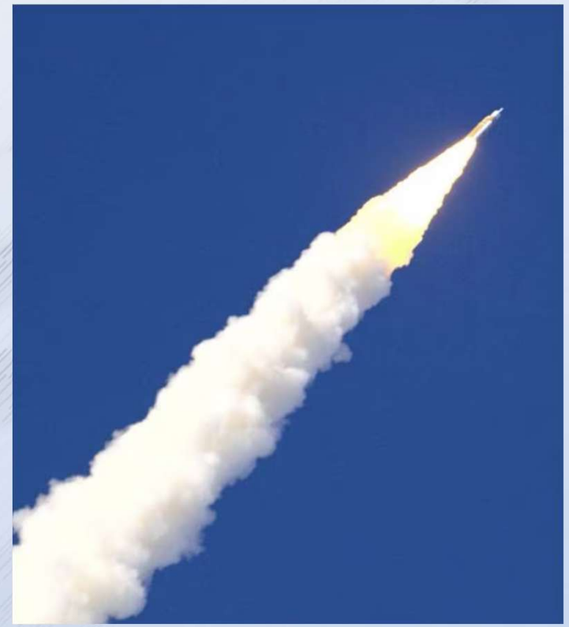
Congratulations NASA's Artemis II Team!!! – It's Good to be Back With a Mission



Reid Wiseman – Commander

Victor Glover – Pilot

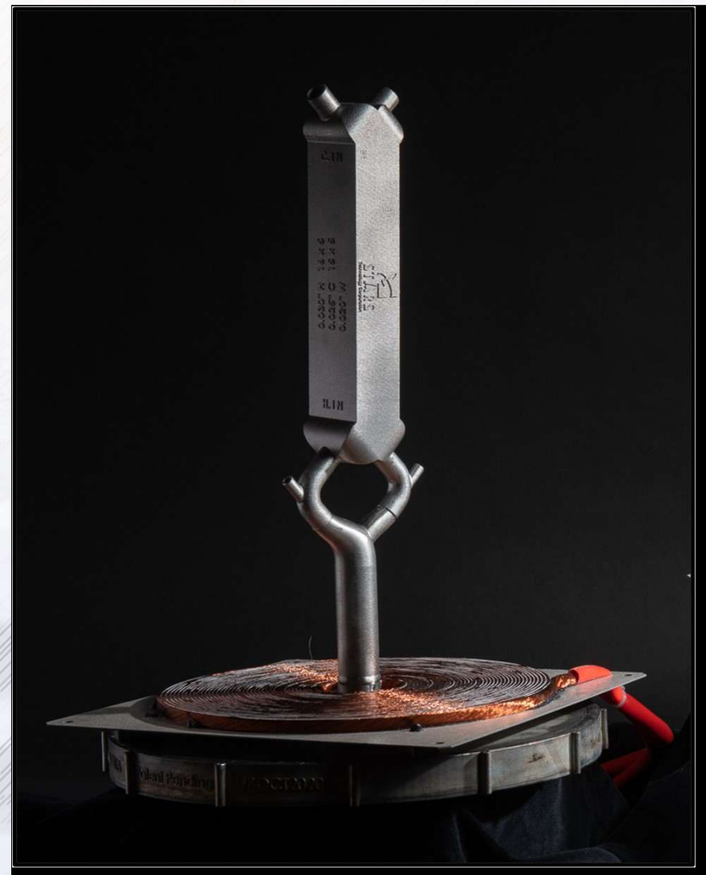
Christina Koch – Mission Specialist

Jeremy Hansen – Mission Specialist (CSA)

Questions?

Dennis Walters
Chief of Staff
STARS Technology Corp.

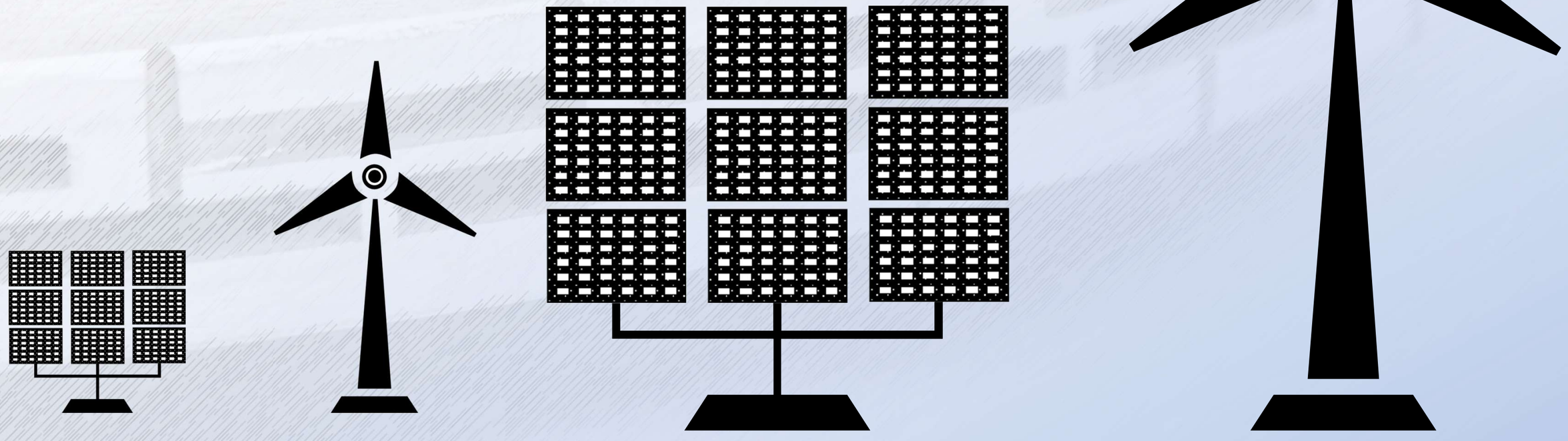
STARS
Technology Corporation



“Beyond producing hydrogen, chemical reactors can be developed to produce ammonia, methanol, and other chemical products using the chemical processing chips.”

- Robert Wegeng President, STARS Technology Corporation -

Three Data Center Energy Challenges



Engineered Hydrogen Safety Features

Low-Cost, Low-Low Carbon, High Reliability, Safe Operation

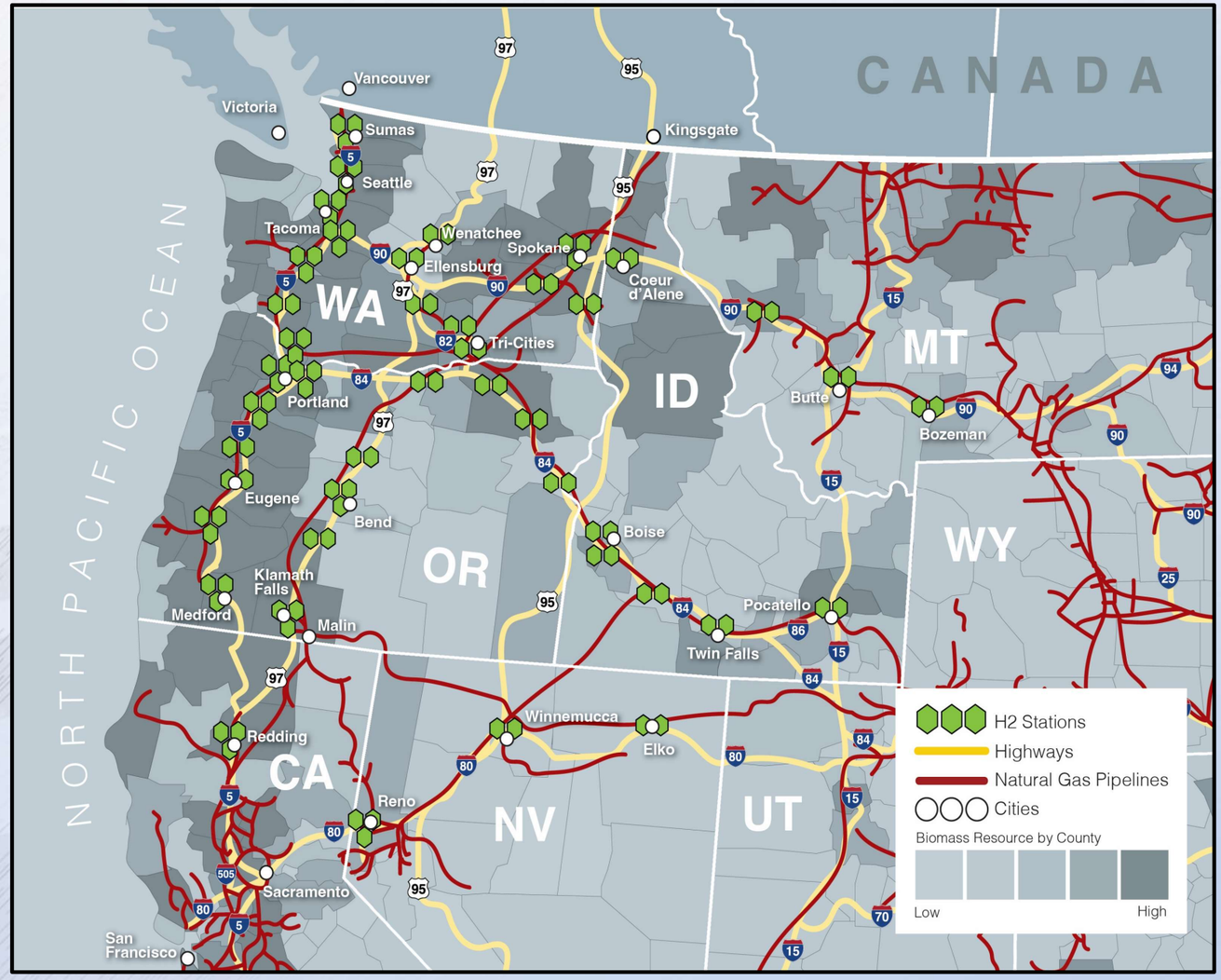
- Microchannel design minimizes “source term”; small volume -> limited risk
- Designed to NFPA Class 1 Div 2 Safety Standards
- Fire and Leak Detection - Methane, Hydrogen, & Infra-red heat sensors
- Isolation of non-Class 1 Div 2 components in ventilated cabinets
- Ventilating fans
- Automated autonomous operation
- Automated shutdown, Isolation and purging of Natural Gas and PSA
- Hazard Operations Review of design

Engineered for Safety, Reliability, and Affordability

STARS' *Transportation Market Opportunities*

Financed, Owned and Operated by STARS

- **Fill Out and Connect Regional Hydrogen Hubs**
- **Open Up Transportation Corridors for H_2 Vehicles**
- **Provide H_2 for Other Uses**



Rapidly Creates: Hydrogen Grid 1.0