ezNG[®] Cellular Array Storage Tanks Simplify & Reduce Cost of Natural Gas Storage & Transport

ezNG® Cells for storing LNG:

- Innovative use of proven materials and technology
- **Patented** cellular form limits wall thickness while allowing **increased storage pressure and hold time**
- Provides viability for localized small to mid-scale storage to solve pipeline supply constraints
- Savings on facility cost versus traditional LNG storage
- Simplified in-shop manufacture and convenient delivery by truck to onshore storage project sites
- Conceived to fit efficiently within ship/barge hulls or within concrete "vaults" on land

Patented ezNG Cellular Arrays enable adoption of lower cost / greener "Pressurized LNG" (PLNG):

- ExxonMobil's extensive R&D confirmed that producing conventional <u>LNG requires up to 100%</u> <u>more energy than PLNG</u>... while PLNG facilities are much simpler, half the cost, and less than half the size (ref. Bowen et al, GasTech 2005)
- Re-gassing is cheaper and uses less energy since <u>PLNG is 80-90°F warmer than LNG</u>
- ezNG cellular storage for PLNG can also be used to store conventional LNG without boil-off
- **CNG** storage costs five (5) times as much as **PLNG** storage per unit of energy stored

Opportunities:

- Natural gas demand forecast as growing to 30% of energy supply by 2030 displacing coal and fuel oil to accommodate the irregularity of renewables
- Distributed storage at pipeline pinchpoints when expansion is challenged by regulations & NIMBY
- Maritime fleets are seen converting to gas to save money and meet stringent exhaust criteria

Value-adding applications:

- Reserve supply for peak demand where supply problems exist enables trading and local retail sales while satisfying spikes that exceed pipeline capacity
- Storing other fluids such as NGLs, ammonia and CO2 (in low alloy carbon steel tanks)
 - NH3 storage allows efficient transport of sustainably generated hydrogen
- Ship, barge, or rail transport to stranded markets
- Manage variability in renewable energy output

Business Model:

- NEAR TERM License technology to tank fabricators and project owners
- Provide technology to Participate in projects

• LONG TERM - Develop and drive projects involving ezNG technology

Simple smooth-walled "cans" or "flasks" fit tightly within ships' holds or insulated concrete "vaults" (onshore) to maximize use of available space



Smooth cells versus complex reinforced prismatic structures or space wasting cylindrical tanks



LNT Fuel Box™ above; GTT Brick™ below



Prismatic tanks take less space than large diameter LNG bullet tanks



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