

# Eavor<sup>TM</sup>

## Energy Independence for Singapore! The Impossible Dream?

### Eavor-Loop<sup>TM</sup> Introduction - SIEW

October 29<sup>th</sup> 2020

Eavor<sup>TM</sup>



# Renewables – A Footprint larger than Singapore itself!

|                                   | Land Use Capacity<br>(ha/MWp) | Capacity Factor | Land Use <b>Generated</b><br>(ha/MW) |
|-----------------------------------|-------------------------------|-----------------|--------------------------------------|
| Wind                              | 34.4                          | 0.60            | 57.3                                 |
| Solar –Singapore                  | 0.77                          | 0.15            | 5.1                                  |
| Eavor-Loop™ 1.0, Germany          | 0.27                          | 1.0             | 0.27                                 |
| Eavor-Loop™ 2.0, Germany          | 0.13                          | 1.0             | 0.13                                 |
| <b>Eavor-Loop™ 2.0, Singapore</b> | <b>0.04</b>                   | <b>1.0</b>      | <b>0.04</b>                          |

## Energy Independence Objective

- But 95% is from fossil fuels,
- And 100% of fossil fuels are imported.

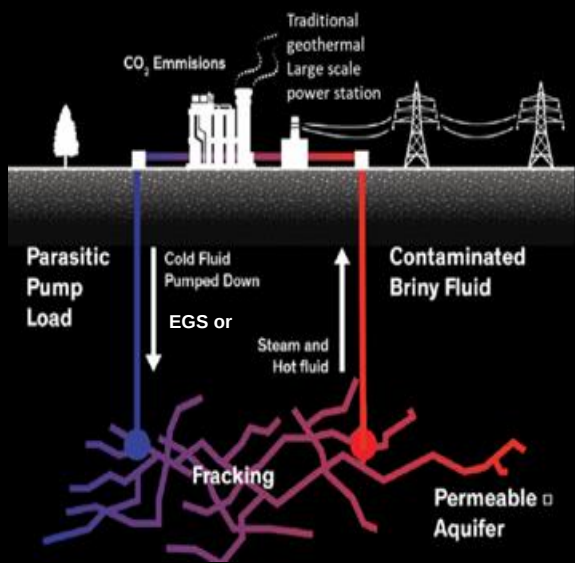
## Wind & Solar are Domestic

- But need a higher density solution,
- As required footprint is larger than Singapore itself.

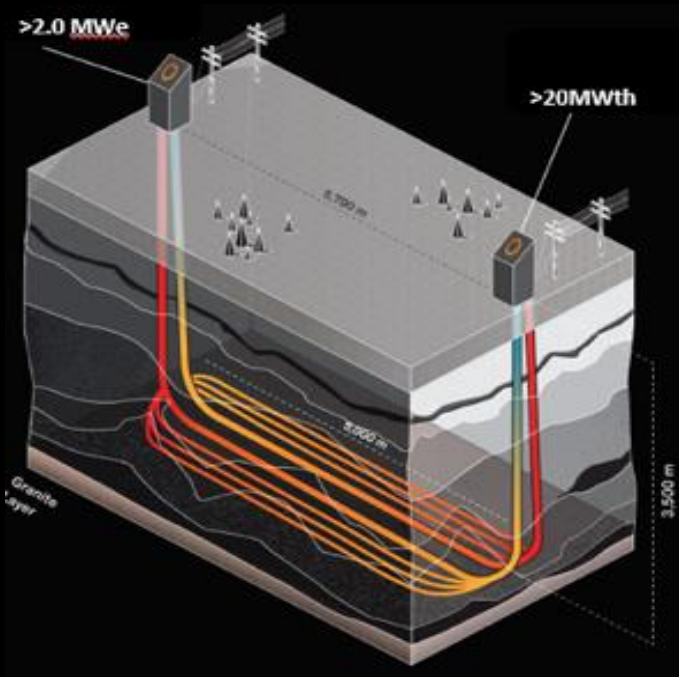
## Eavor-Loop fills the Gap

- Is available domestically up to 10 GW
- Has at least ~**130x** smaller footprint than solar and **>1,000x** less than wind
- Key sites can be buried for zero net surface footprint

# Eavor-Loop™ - Geothermal Energy Reimagined

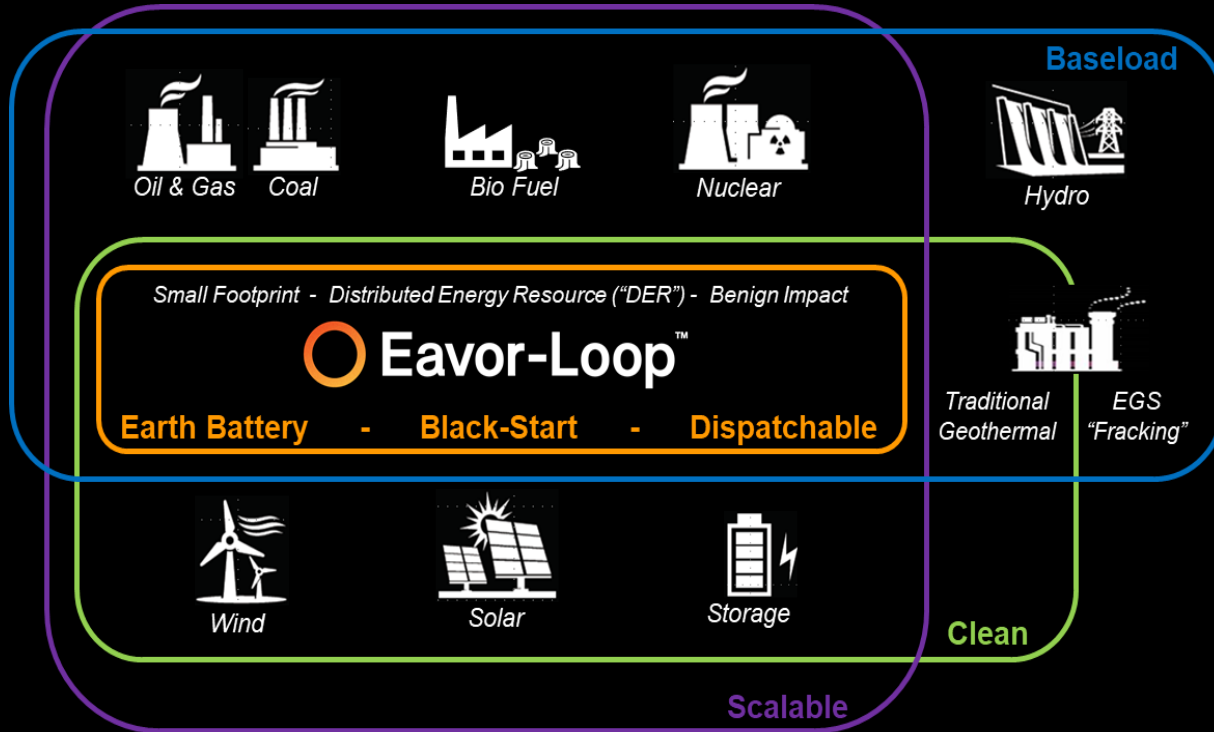


| Traditional Geothermal                                                                | Eavor-Loop™                                                                                |
|---------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| Open System: water flows through reservoir, fluid exchange between system & reservoir | Closed System: working fluid circulates in isolation from the reservoir, no fluid exchange |
| Requires a permeable aquifer & hot convective zone                                    | No need for permeable aquifer                                                              |
| Requires an electrical pump to circulate brine: parasitic load                        | Driven by natural thermosiphon, no pumping required                                        |
| Can require fracking to increase flow, potential for induced seismicity               | No fracking required, no induced seismicity                                                |
| Can produce GHG & CO2 with produced brine                                             | No GHG or CO2                                                                              |
| Continuous water use & ongoing treatment required                                     | No water use, no production brine requiring treatment                                      |
| Baseload, not Dispatchable                                                            | Baseload and Dispatchable                                                                  |



# Eavor-Loop™ - A New Power Category

Providing a Scalable Domestic Source of Clean Dispatchable Power



The Eavor-Loop™ system requires no connection to the outside world and operates without fuel and completely emissions free. The fully independent system can be placed in a bunker or **buried below surface**; be made impervious to all types of natural disasters.

**The highest amount of resilience, independence with the lowest environmental footprint in category.**



## Eavor Earth Battery™

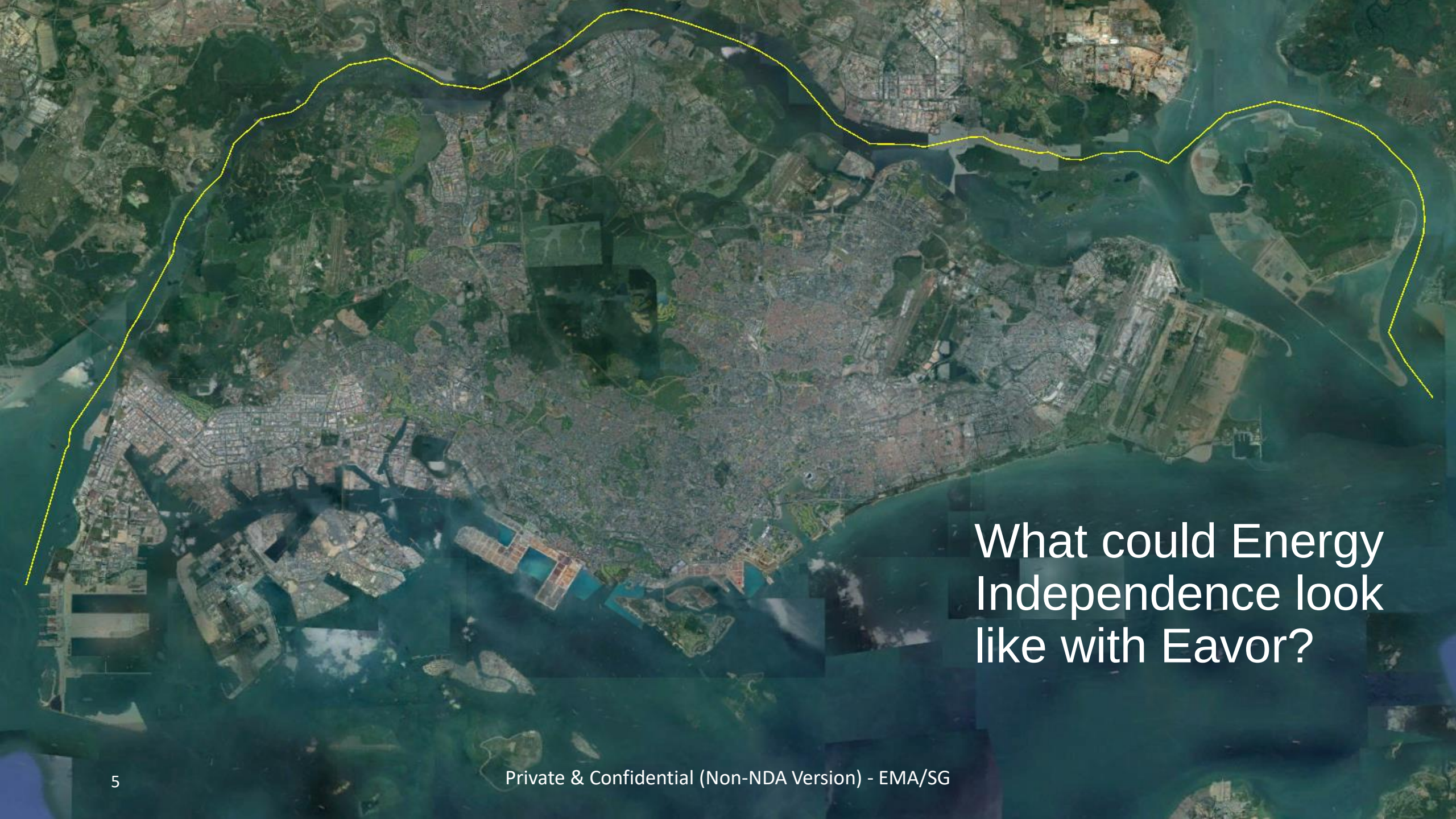
Transient operation allows system to charge during low-demand, and discharge at high-demand periods with no material impact to net energy output over life of the project.

**Product competes with energy storage.**



The world's most **benign environmental impact & surface footprint**. Eavor can fit in a backyard, repurpose inactive well sites or decommissioned industrial/commercial facilities. The facility has no emissions of any kind during operations.

**Eavor is the solution the world has been waiting for.**

An aerial photograph of a coastal city, likely San Francisco, with a yellow dashed line tracing a path along the coast and through the city. The line starts on the left, follows the coastline, then moves inland through various urban and green areas, ending on the right side of the image. The city is densely packed with buildings, and the surrounding area includes water, parks, and some industrial zones.

What could Energy  
Independence look  
like with Eavor?



**10 GW Dispatchable / Baseload**  
- Start with one 80 MW Site  
- Grow to 125 Strategic Sites  
- 3 Hectares or less per Site  
- Key Sites buried or dual use so  
no net surface footprint



Energy For **Eavor**<sup>™</sup>