

2013 OTEC International Forum

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Evolution of FPSO Power Plants

Gen 1

~ 20 MWe



Gen 2


~ 100 MWe



Gen 3

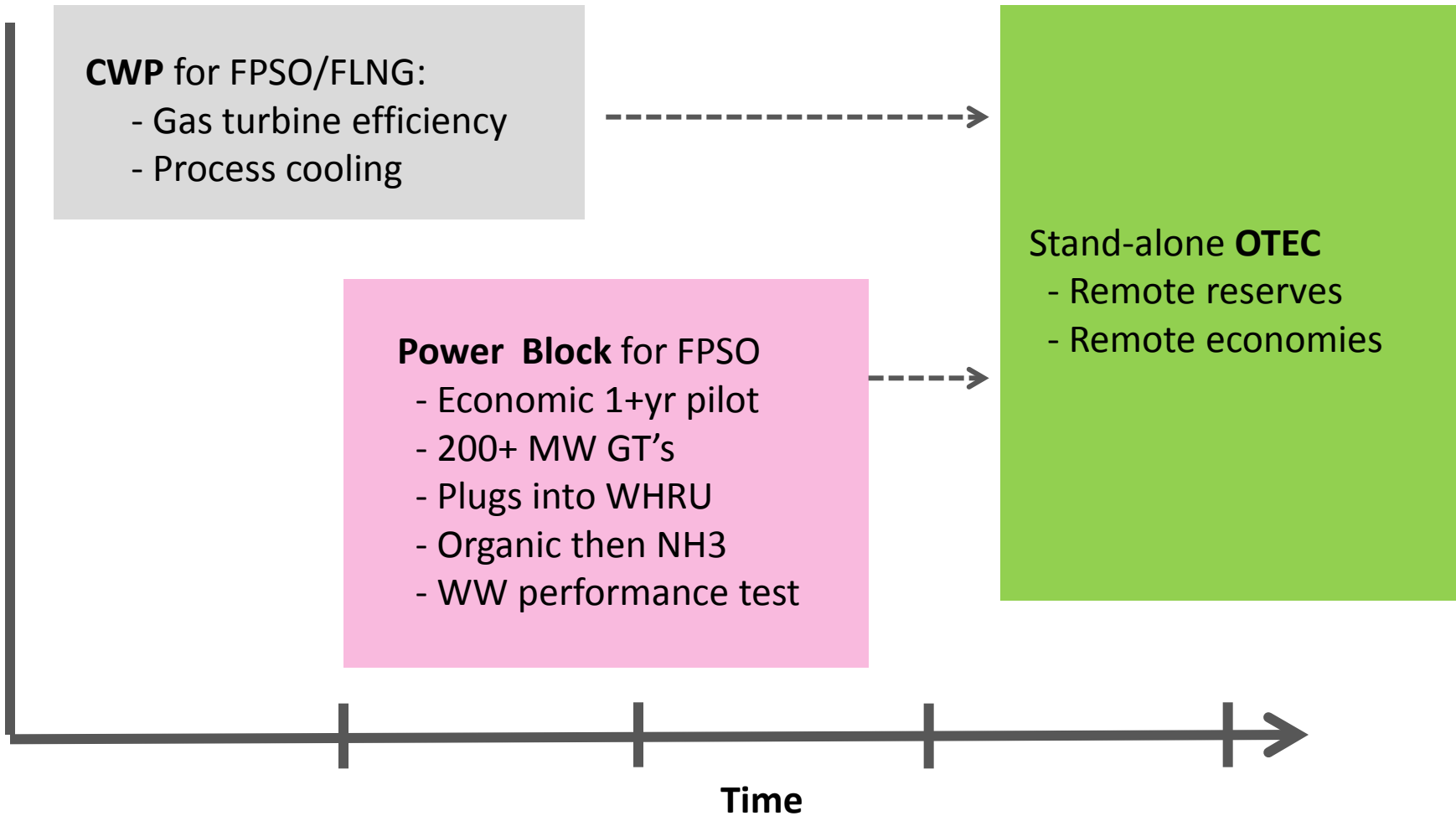
~200 MWe



- 
- More Shaft Power
 - More Process Complexity
 - More Waste Heat



<u>Competency</u>	<u>FPSO</u>	<u>OTEC</u>
<u>Technology</u>		
•Systems integration	Y	Y
•Facilities	Y	Y
•Hull conversion	Y	Y
•Deepwater mooring	Y	Y
•Deepwater risers	Y	Y
•Installation	Y	Y
<u>Business Models</u>		
•Turnkey	Y	Y
•Lease/Operate	Y	Y
•Purchased Power Agmts	N	Y





- OTEC R&D to date has been internally funded.
- SBM projects include turnkey sales and lease/operate.
- SBM currently lease/operate 11 floating systems (+ 9 in construction).
- ‘OTEC’ module could be included in FPSO with normal financing.
- “Typical” FPSO Contract:
 - Capex \$ 750 Million
 - FPSO lease contract duration: 5-20 years
 - Construction: 2 years.