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Presentation to the Canadian Nuclear Society
Saskatoon

Agenda

1. Introductions
2. Generation mPower structure
3. Technical overview
   - mPower Plant layout
   - Nuclear Island overview
   - mPower reactor module
4. Post-Fukushima design robustness
5. Design and licensing maturity
6. Economic competitiveness
7. mPower value proposition

Generation mPower LLC

Formal alliance between B&W and Bechtel

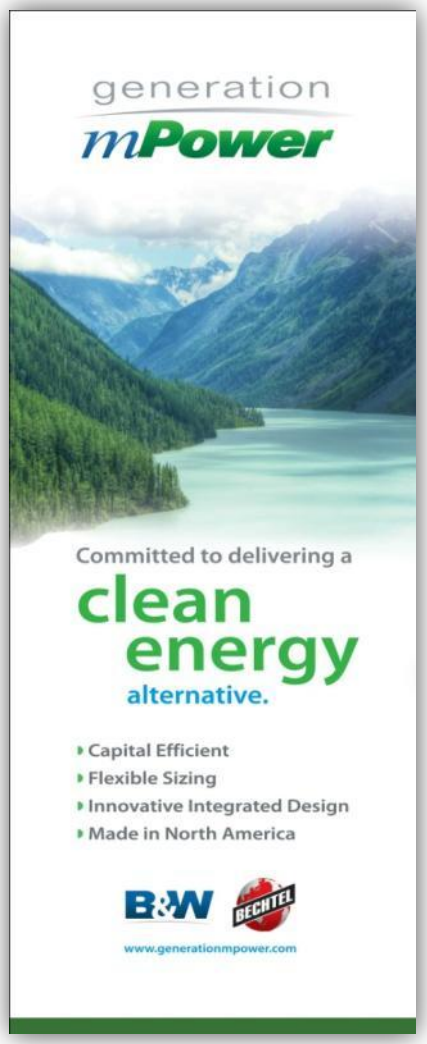
- Joint Venture agreement executed July 14, 2010
- Substantial investment commitments by B&W and Bechtel

Recognized and established energy industry leaders

- B&W:
  - 60+ years of nuclear engineering and manufacturing experience
  - Exclusive B&W mPower™ reactor technology
- Bechtel Power:
  - 60+ years of nuclear power industry experience
  - Integrated engineering and project management leadership

Alliance objectives:

- Design, license and deploy first commercially viable Gen III++ SMR
- Improve cost and schedule certainty, with reasonable investment
- Increase accessibility to nuclear power across global energy industry



www.generationmpower.com

A "game changer" for the global energy industry

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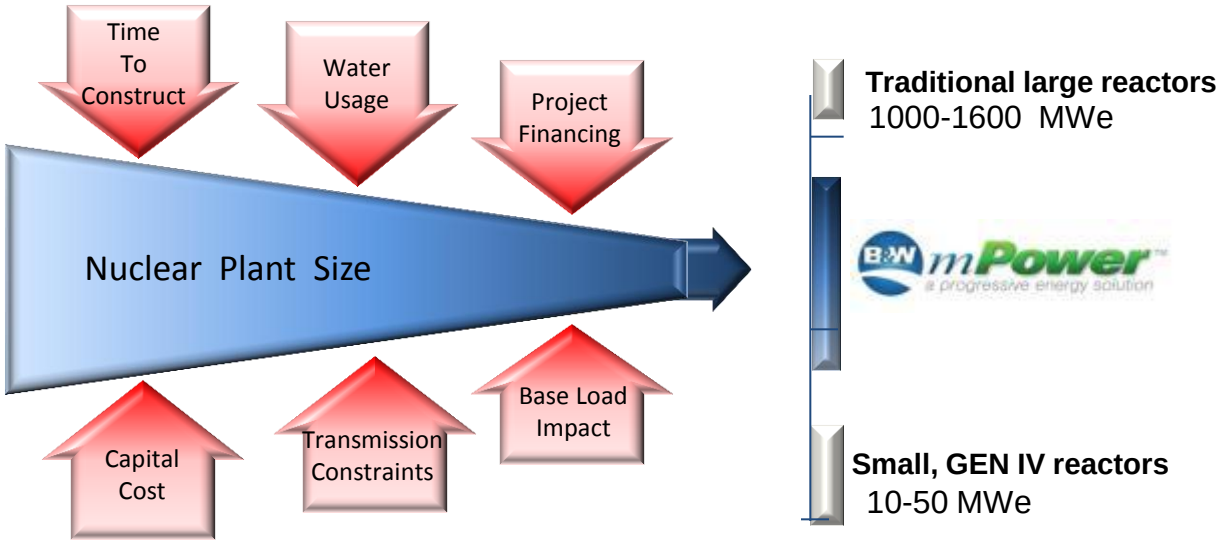
Current Market Landscape

Fundamental Issues:

- Energy Independence
- Long-Term Load Growth
- Environmental Concerns
- CO_2 Constraints
- Diversity of Fuels
- Gas Price Volatility



One size does not fit all…

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B&W mPower™ *Integral* Reactor

From This To This

Traditional 2 Loop PWR NSSS

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Goal and Value Proposition

Develop and deploy, by 2020, an SMR that offers:

- ✓Lower capital cost
- ✓Schedule and cost certainty
- ✓Competitive LCOE pricing

within the constraints of:

- Proven: GEN III+, established nuclear regulation
- Safe: Robust margins, passive safety
- Practical: Standard fuel, construction and O&M
- Benign: below grade, small footprint, public acceptance

B&W mPower™ a progressive energy solution

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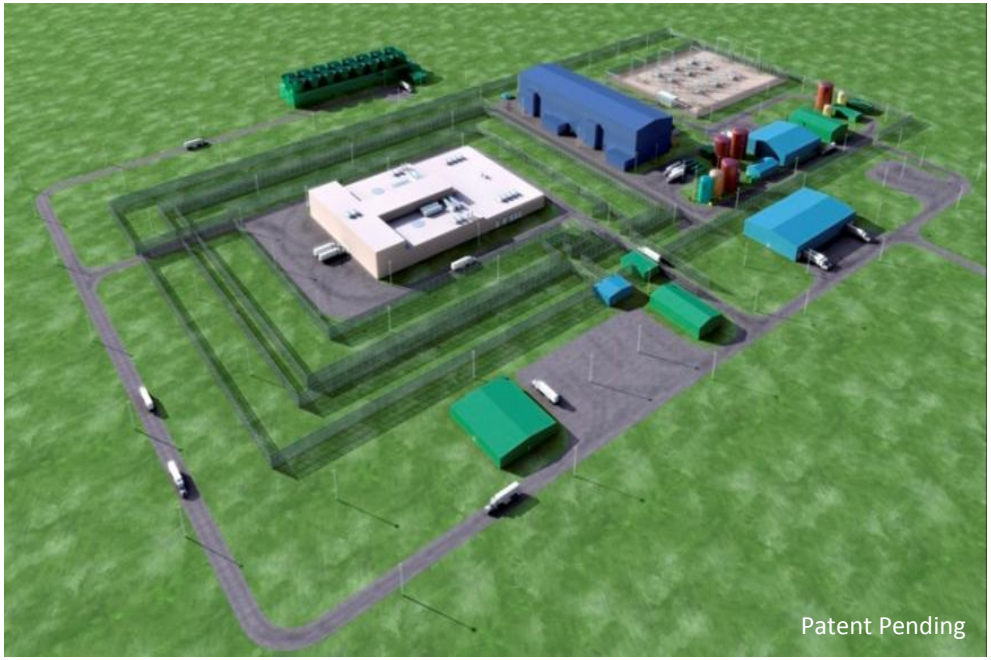
“Twin Pack” mPower Plant Site Layout



mPower “Twin Pack” Site Layout
with Water-Cooled Condenser

- 2 x 180MWe* units
- Compact <40-acre site footprint*
- Low profile, separated NI and TI
- All safety-related SSCs below grade
- One-to-one reactor to T/G alignment
- Enhanced security posture
- Optimized for minimum staff and O&M
- Water- or air-cooled condenser option
- Conventional steam cycle components
- “Island Mode” operation
- 3-year construction schedule

*with water-cooled condenser

Security-informed plant design contains O&M costs

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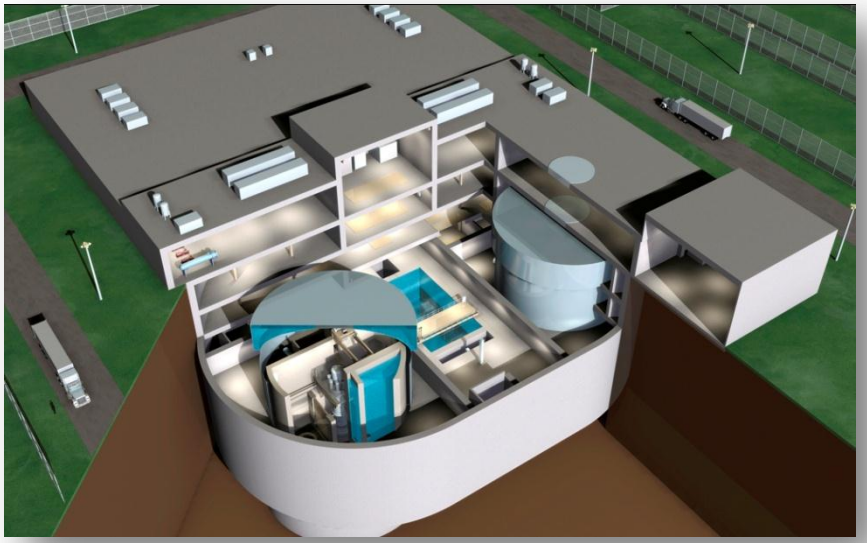
Nuclear Island Features

Fully underground

- Protected from external threats
- Enables security-informed architecture
- More efficient seismic design
- Steel containment, with space for O&M activity



"Passive safety" design

- No safety-related emergency AC power
- 72-hour safety-related control/monitoring battery
- No shared active safety systems between units
- 14-day "coping time" under station blackout
- No containment sprays, sumps, or recirculation
- Multi-layered defense-in-depth for ~10^{-8} CDF

Enhanced spent fuel pool configuration

- Underground, inside reactor building
- Large heat sink with 30-day "coping time"

" Simple and robust" architecture lowers cost and risk, enhances licensing

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B&W mPower™ Reactor

Integral 530 MWt NSSS module

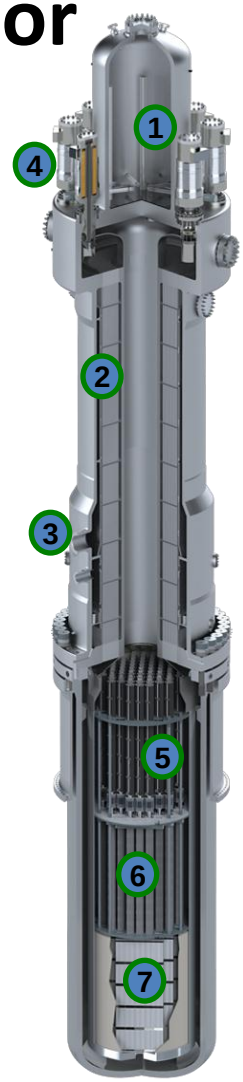
- Core, CRDMs, SG, Pressurizer and Coolant Pumps
- No penetrations below top of core
- 50 degree superheat in Secondary Loop
- 60 year design life, rail shippable

Passively safe design philosophy

- Core remains covered during all DBAs
- No active ECCS or safety-related AC power

4-Year fuel cycle with "standard" PWR fuel

- 69 fuel assemblies with <5% ^{235}U enrichment
- ~Burnable poisons, no chemical boron shim in coolant



1. Pressurizer
2. Once-Through Steam Generator
3. Feedwater Inlet / Steam Outlet
4. Reactor Coolant Pumps
5. Electro- Hydraulic CRDMs
6. Upper Internals
7. Reactor Core

Modular ALWR with best of Generation III+ features … low risk, low cost and passively safe

Process Development / Planning

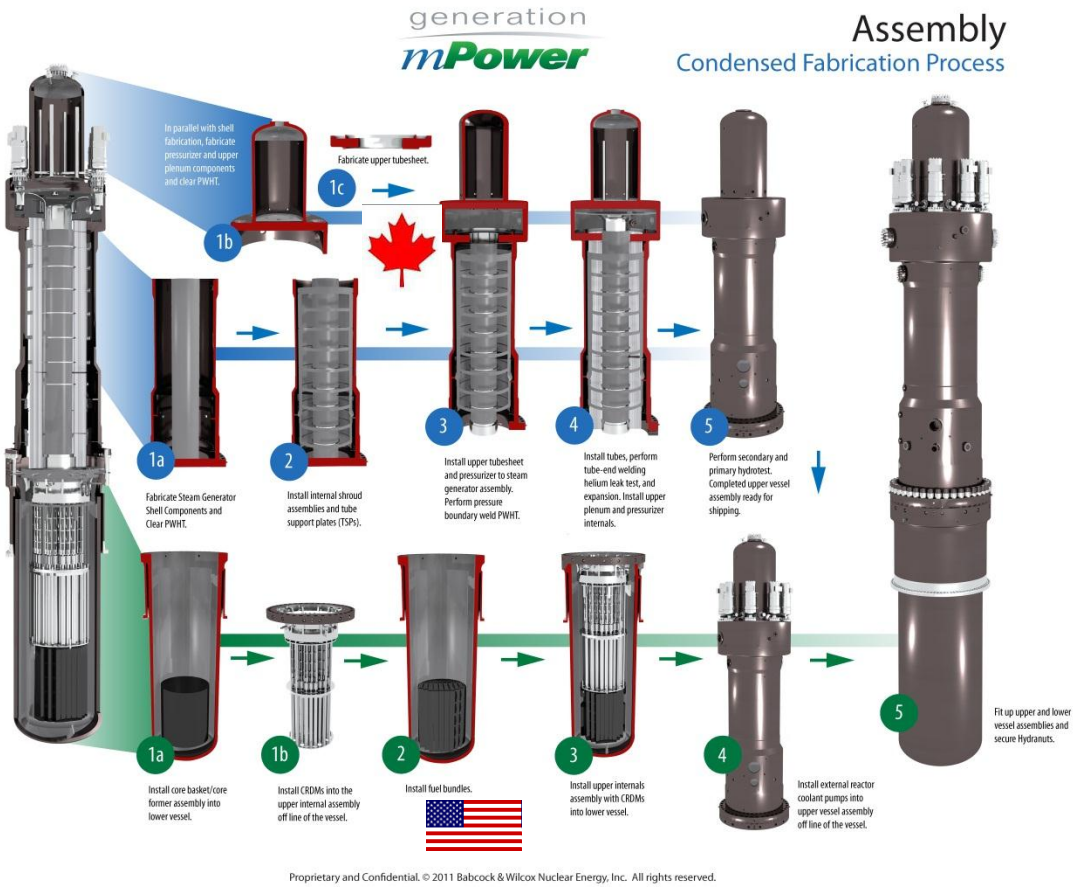
GmP is positioned for unprecedented coordination between:

- sub-tier component suppliers
- fabrication plants
- field construction

Maximizing the benefits of modularity

Utilize full corporate know how and experience in design and construction

- System Design in US
- Component Design in US and Canada



Outstanding execution of SMR modularity will be the technology "advantage" that leverages the North American nuclear industry into a leading role internationally

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Protection against "Fukushima-type" Events

Events and Threats	mPower Design Features
Earthquakes And Floods	• **Seismic attenuation**: Deeply embedded reactor building dissipates energy, limits motion • **"Water-tight"** : Separated, waterproof reactor compartments address unexpected events
Loss of Offsite Power	• **Passively safe**: AC power, offsite or onsite, not required for design basis safety functions • **Defense-in-depth**: 2 back-up 2.50MWe diesel generators for grid-independent AC power
Station Blackout	• **3-day batteries**: Safety-related DC power supports all accident mitigation for 72 hours • **APU back-up**: Auxiliary Power Units inside reactor building recharge battery system • **Long-duration "station keeping"**: Space allocated for 7+ day battery supply for plant monitoring/control
Emergency Core Cooling	• **Gravity, not pumps**: Natural circulation decay heat removal; water source in containment • **Robust margins**: Core heat rate (11.5kW/m) and small core (500MWth) limit energy • **Slow accidents**: Maximum break small compared to reactor inventory (4.7x10-5m^2/m^3)
Containment Integrity and Ultimate Heat Sink	• **Passive hydrogen recombiners**: Prevention of explosions without need for power supply • **Internal cooling source**: Ultimate heat sink inside underground shielded reactor building • **Extended performance window**: Up to 14 days without need for external intervention
Spent Fuel Pool Integrity and Cooling	• **Protected structure**: Underground, inside reactor service building, located on basemat • **Large heat sink**: 30+ days before boiling and uncovering of fuel with 20 years of spent fuel

Multi-layer defense … mitigates extreme beyond-design basis challenges

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Design and Licensing Status

- Full-scale development ongoing since 2009 with substantial $$ invested
- NSSS is 50% design complete with robust core and safety margins
- Plant and Nuclear Island architecture defined, seismic analysis underway
- New, full-fidelity Integrated Systems Test (IST) facility operational
- Control room engineering simulator under construction
- Critical components status:
  - Steam Generator – detailed design based on proven B&W OTSG technology
  - CRDM – operational “in vessel” prototype built, separate effects testing underway
  - RCP – conceptual design complete for canned-motor solution, vendor engaged
  - Fuel – full-scale dummy fuel assembly fabricated, CHF testing 50% complete
- NRC and CNSC engaged on pre-application activities
  - 17 Licensing Topical Reports and Papers submitted to date
  - Regulatory Framework Documents for Clinch River completed and reviewed with NRC
  - Phase 1 Pre-licensing review under way with CNSC

On-target for Design Certification Application in 4Q13 … No changes to NRC regulations needed

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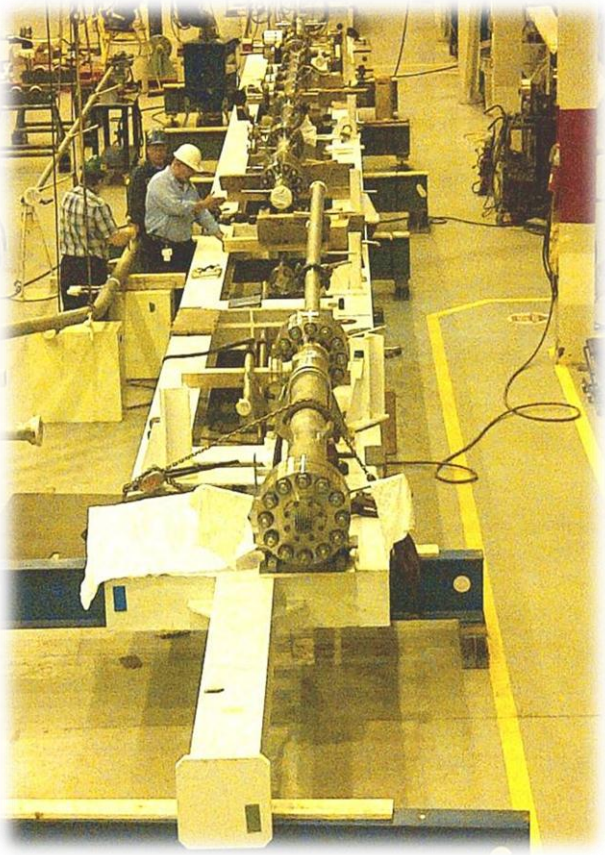
Testing Program

Component Prototyping

- Reactor Coolant Pump
- Control Rod Drive Mechanisms
- Fuel Mechanical Testing
- CRDM/Fuel Integrated Test
- Fuel Critical Heat Flux
- Emergency Condenser

Integrated Systems Testing

- Heat Transfer Phenomena
- Steam Generator Performance
- LOCA Response
- Pressurizer Performance
- Reactor Control



Dedicated mPower facility … backbone of $100M testing program

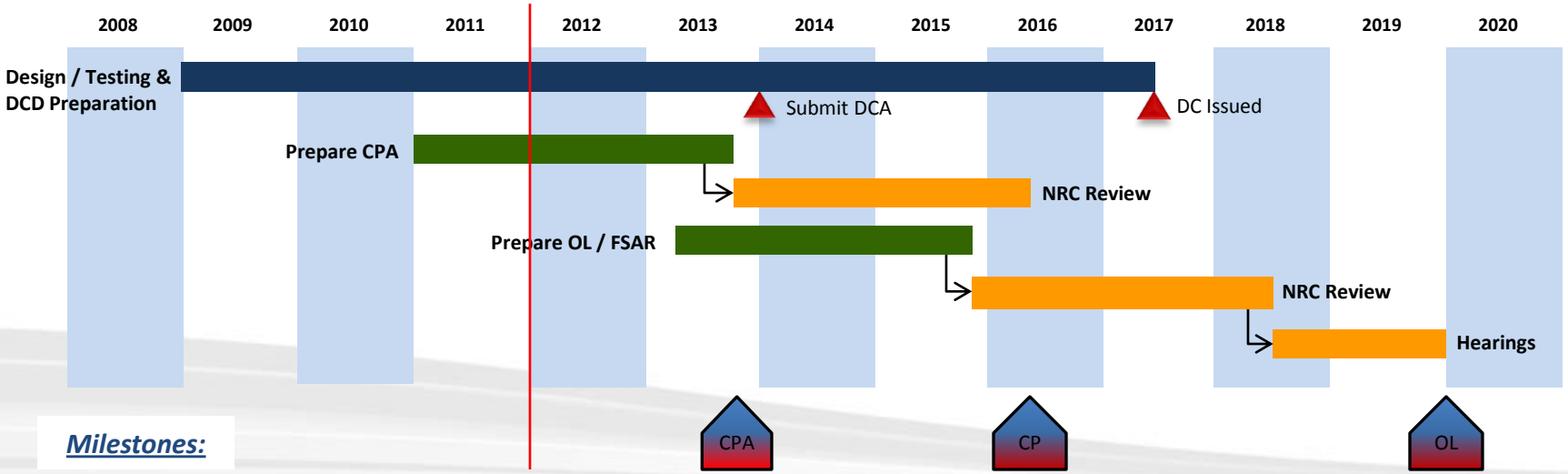
Licensing Strategy - USA

Lead Plant (TVA Clinch River): 10CFR50

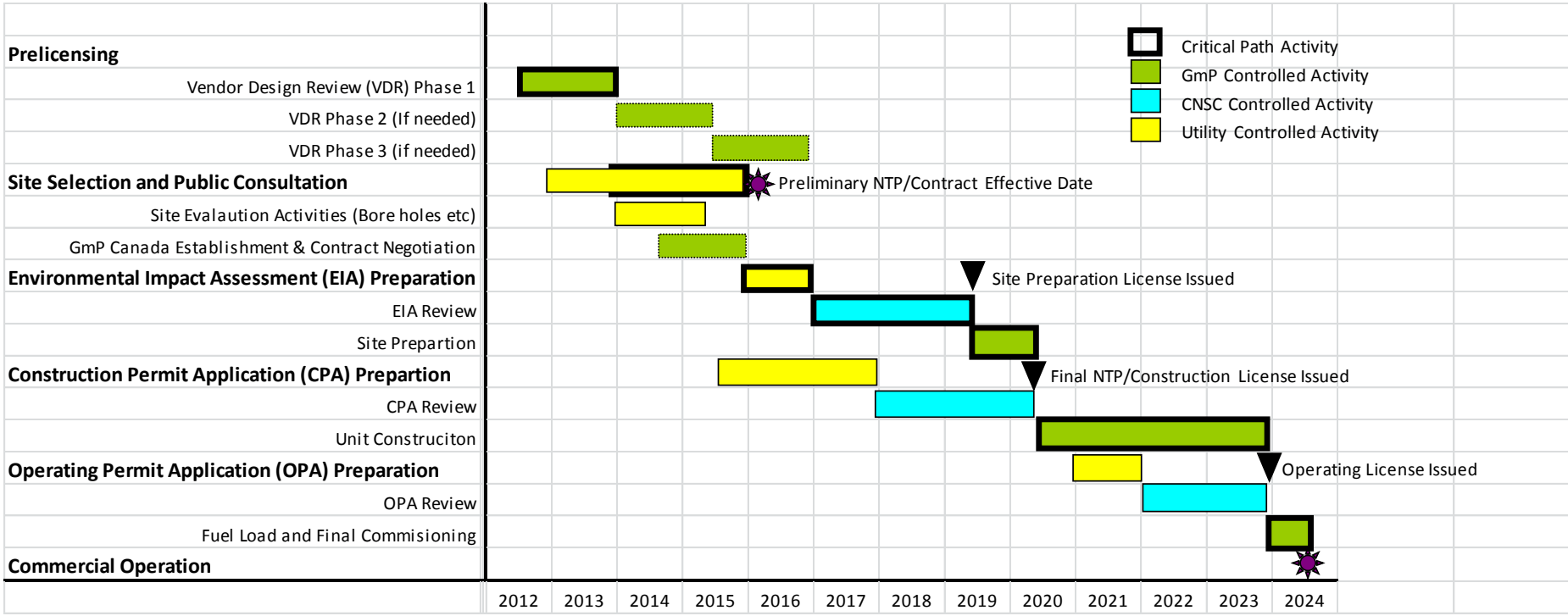
- First U.S. site-specific SMR license application
- 10CFR50 license approach lowers FOAK risk
  - Targeting late 2013 CPA submittal by TVA
  - Enables design changes in construction
- CP is opportunity to identify NRC issues early
- Manage regulatory risk with early engagement

Subsequent Plants: 10CFR52 with DC/COLA

- Gain DCD efficiency by levering PSAR work
- Submit DCA during 4Q13
- Target Design Certification by NRC in 2017
- Resolve all known FOAK issues before filing DCA
  - 24 topical & technical reports planned pre-DCA
  - Continue aggressive pre-DCA NRC engagement



Licensing Strategy - Canada



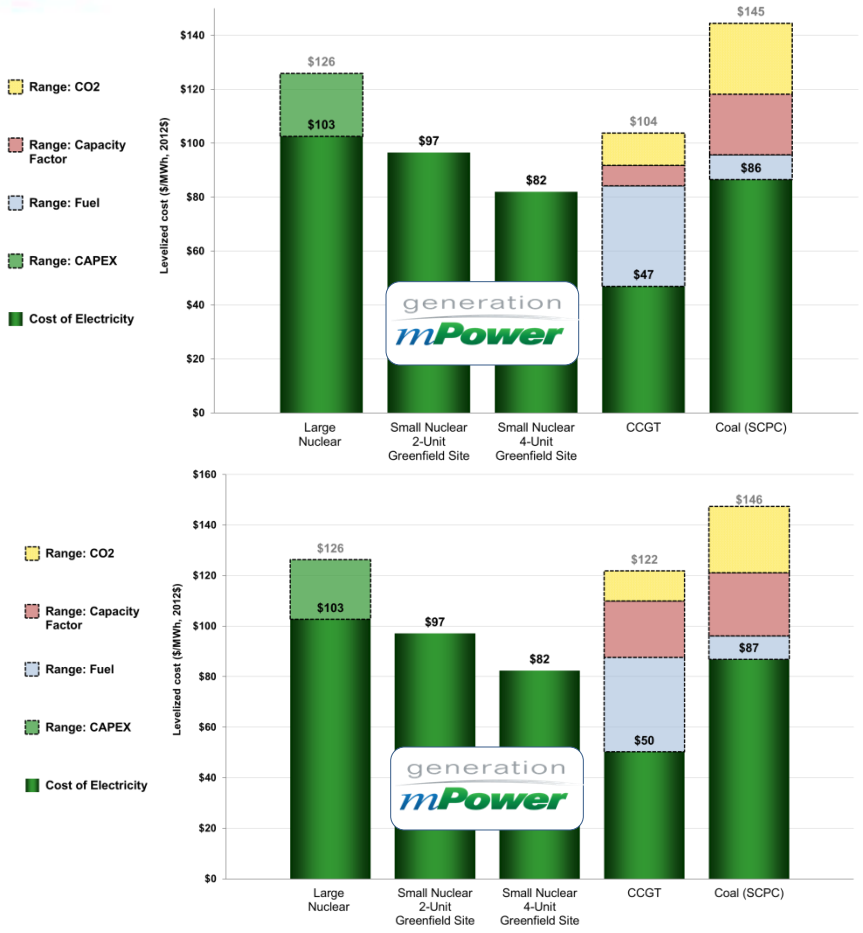
Achieving Competitive Levelized Cost of Electricity (LCOE)

Minimize Overnight Cost

- Optimum power output (180 MWe)
- Simple standard plant layout and design
- Competitive global supply chain
- Innovative modularization
- Short construction schedule (3 years)
- Competitive Overnight costs for 360 MWe greenfield plant

Optimize Operating Costs

- "Plug and Play" design levers existing infrastructure
- 80%* reduction in security staff with normal DBTs
- 3 licensed operators/shift for "two-pack"
- Fleet O&M support enabled by standardization
- DCWG approach with IAC for utility-centric design



Key Assumptions: Fuel range = $4.00 - $10.0/MMBtu (NG); $3.50-4.500/MMBtu (Coal)
CO_2 price range = $0 - $30/ton
Capacity factor = 92% (Large Nuclear); 95% (SMR); 60-90% (Coal)
CCGT: 50-70% (FL); 30-60% (NC)
CAPEX range = $4600 - $6000/kW (Large Nuclear)

Competitive LCOE range: $82-97/MWh

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mPower Value Proposition

- **Near-term (2020) regulatory response option**
  - Addresses tightening environmental constraints (CSAPR, MACT)
  - Hedges against mid-term GHG “carbon tax” uncertainty
- **Portfolio “balancing” opposite natural gas build-out**
  - Environmentally clean, stable fuel cost, dispatchable generation
- **Competitive “utility scale” power plant economics**
  - $5000/kW ONC equivalent or better than GW-class options
  - Competitive LUEC from low security and plant staffing
- **Reasonable (<$1.8B) investment and project risk**
  - Incremental investment for incremental generation (360 MWe)
  - ~70% factory and off-site construction supporting 3-year schedule
- **Low-risk technology and infrastructure for ~2020 COD**
  - NSSS 50% complete, DCA pre-application licensing underway
  - Existing North American reactor manufacturing capability