SASOR Canada Ltd

Tetra Tech Inc.

4S reactor applications -

Economic case studies

May 2009

Agenda

- Roles of Tetra Tech and SASOR Canada
- Why the 4S Reactor and not others
  - Size
  - Production and Cost
  - Environmental benefits
- Provide Business Plans for Deployment
  - Cost comparisons
  - Time Phased Milestones
  - What SASOR Canada seeks from an oil sands producer
- Discussion

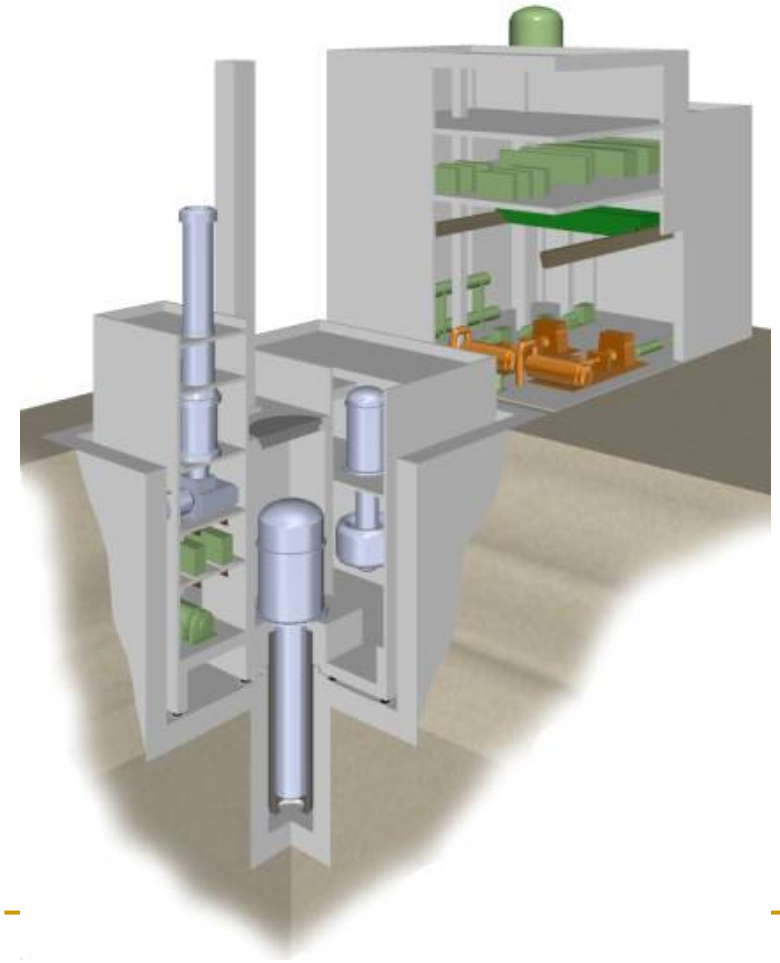
Tetra Tech Inc

- $2 billion (US) licensing , engineering and construction provider with 10,000 employees
- Has business interest in support of small and large nuclear power
- Staff very familiar with all types of small, advanced and large reactor technologies
- Tetra Tech - Wardrop Engineering
- Offices in Canada and in the US

SASOR Canada

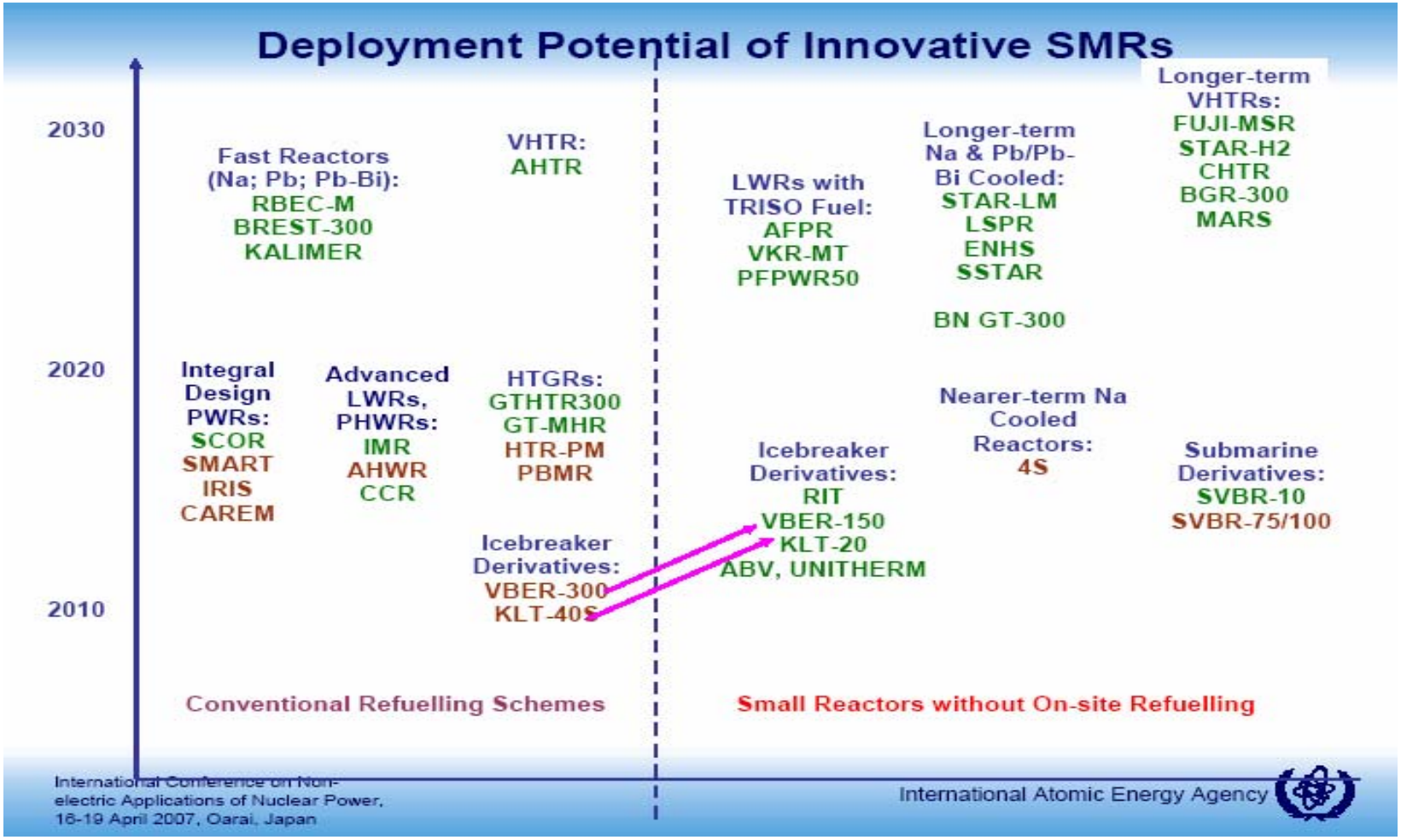
- Formed by group of experts in energy markets, Canadian natural resource extraction, nuclear power and business development in 2004
- Foresaw the business interest in nuclear power for cost reasons, social interest for GHG reduction and economic and environmental reasons
- Offices in Calgary and in the US
- Funded for development, siting and licensing a small reactor in oil sands service
- SASOR Canada will BOO (build, own, operate) under contract and sell “over the fence” energy assets to oil sands producer

4S Reactor



- 50 MWe -135 MWth LMR (sodium moderated and cooled)
- Modular construction
- 15-30 year core – No refueling
- No used fuel on site
- Passive safety systems
- Low pressure reactor system
- In US NRC pre licensing process
- Expeditious manufacturing and deployment
- High reliability
- Proliferation resistant
- Included in DOE GNEP proposals

Deployment Readiness



Advantages of the 4S Design

- **Simple design- factory constructible**
  - Easy to construct – Atmospheric operating pressures
  - Small modules – Easy to transport
  - Based on proven design and historic operations
- **Small components**
  - Easy to fabricate
  - Many sources in supply chain
- **Technical licensing documents being completed**
  - USNRC licensing process ongoing
  - Inherent safety proven by testing
  - Small reactor with 15-30 year core and refueling cycle
  - Japanese interests have spent over $300 Million over 20-years on 4S development

Oil Sands Applications

- Steam distribution limited to 10-15 km
- Dedicated steam distribution for 4S over approximately 300-700 square km if located at the center of the production area
- If formation becomes depleted 4S reactor can be remissioned to serve other needs including hydrogen production, water treatment, upgrading, chemical production, etc.
- 15 years before refueling
- The 4S is air cooled
- Air and water emissions virtually nil

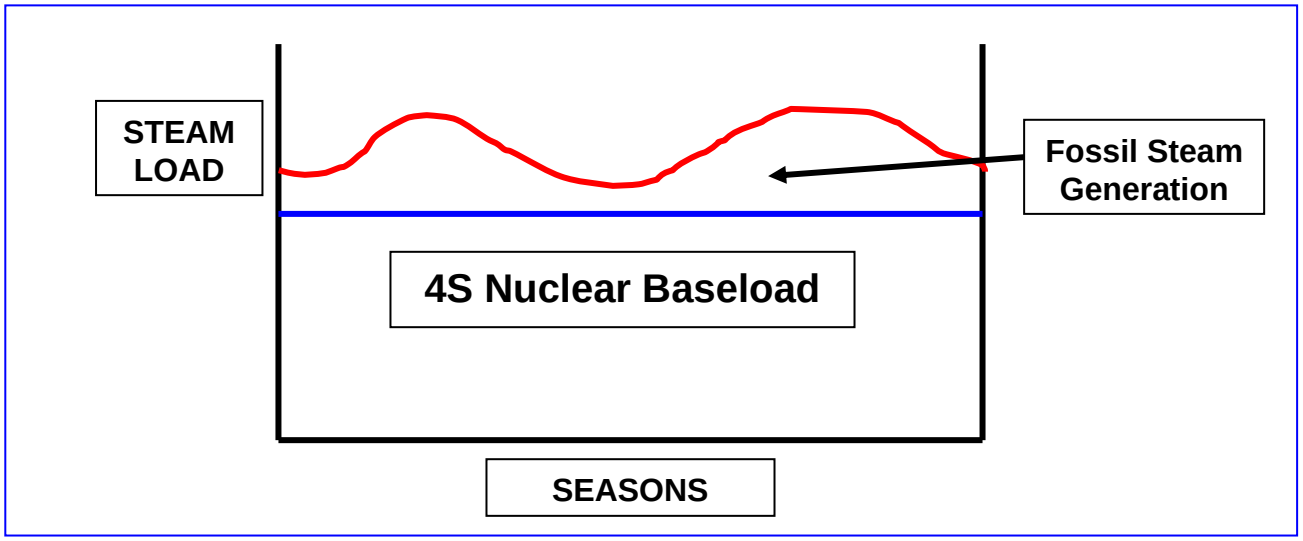
4S in oil sands production

- **270 MW thermal**
- **2x 135MW 4S facility**

  -Configured for surface and SAGD
- **Steam Cost:**
  - **Significant discount off avoided cost or fixed price steam purchase agreement**
- **Steam cycle will be tailored to specific applications during Feasibility Study**

4S in oil sands production

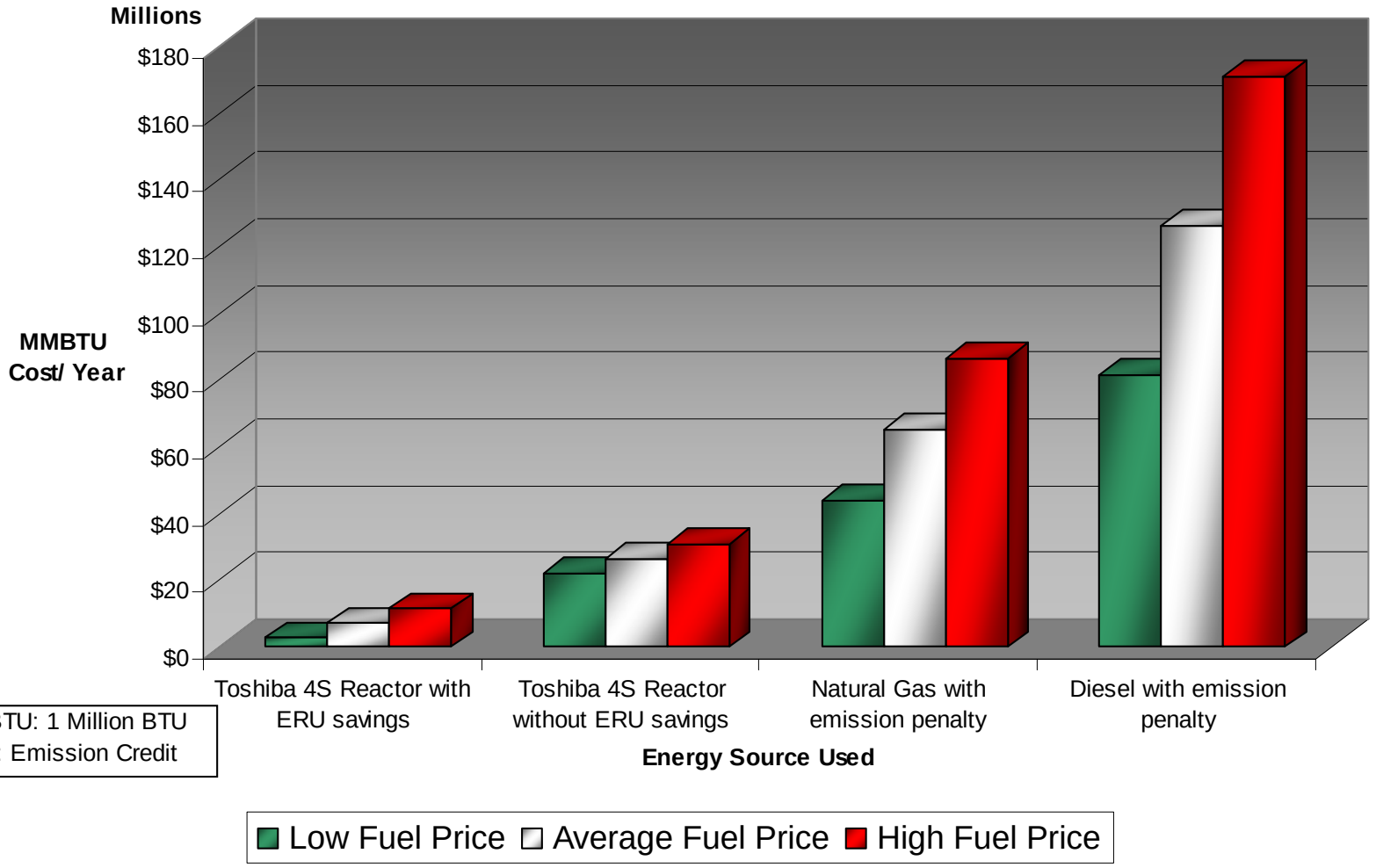
- 4S will be deployed in 2 reactor unit configuration
  - Capable of 40,000 bbl/day in SAGD
  - 270 MWth for surface and upgrading applications
- 4S units are base load steam production capability
  - Supplemented by fossil fuel steam production

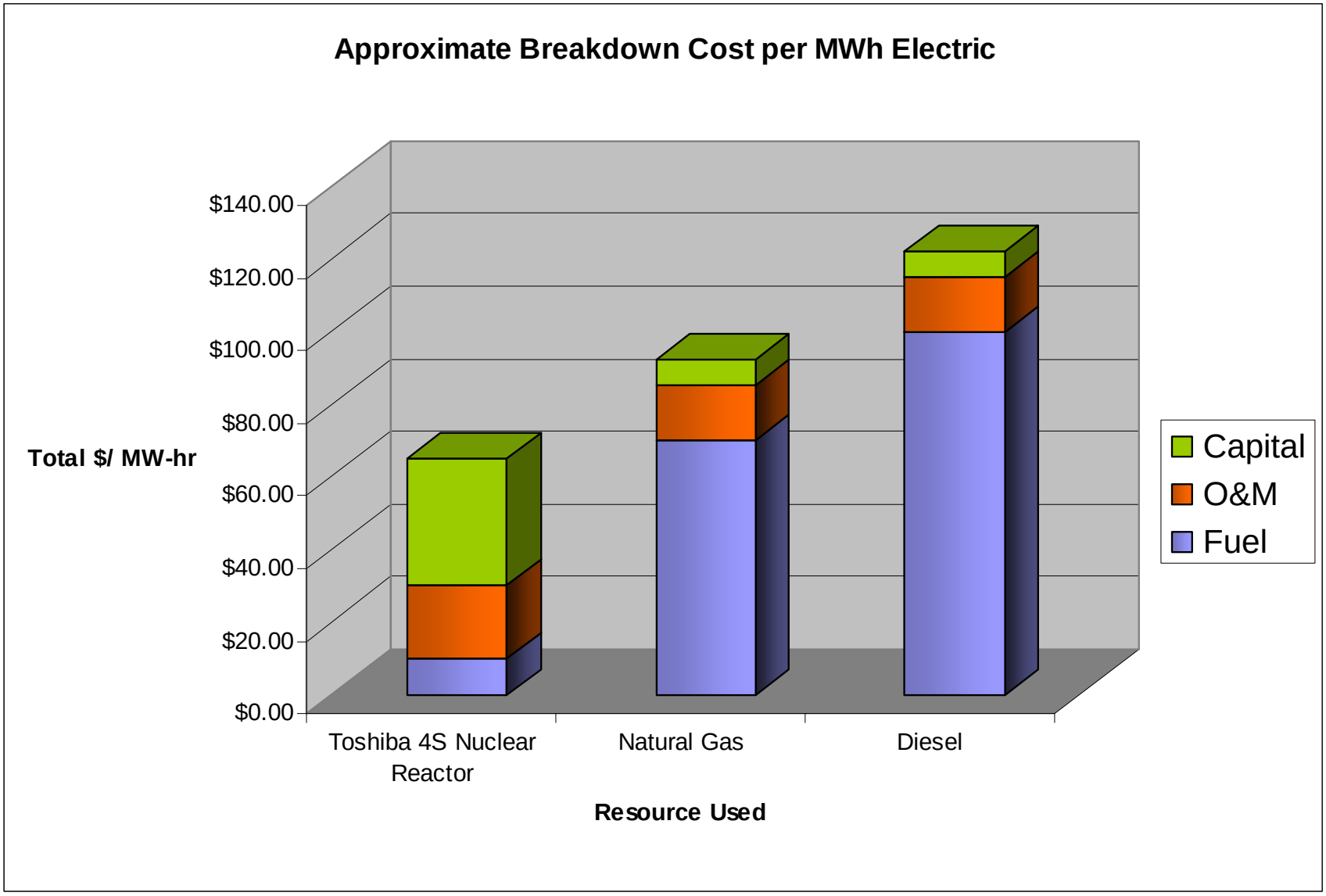


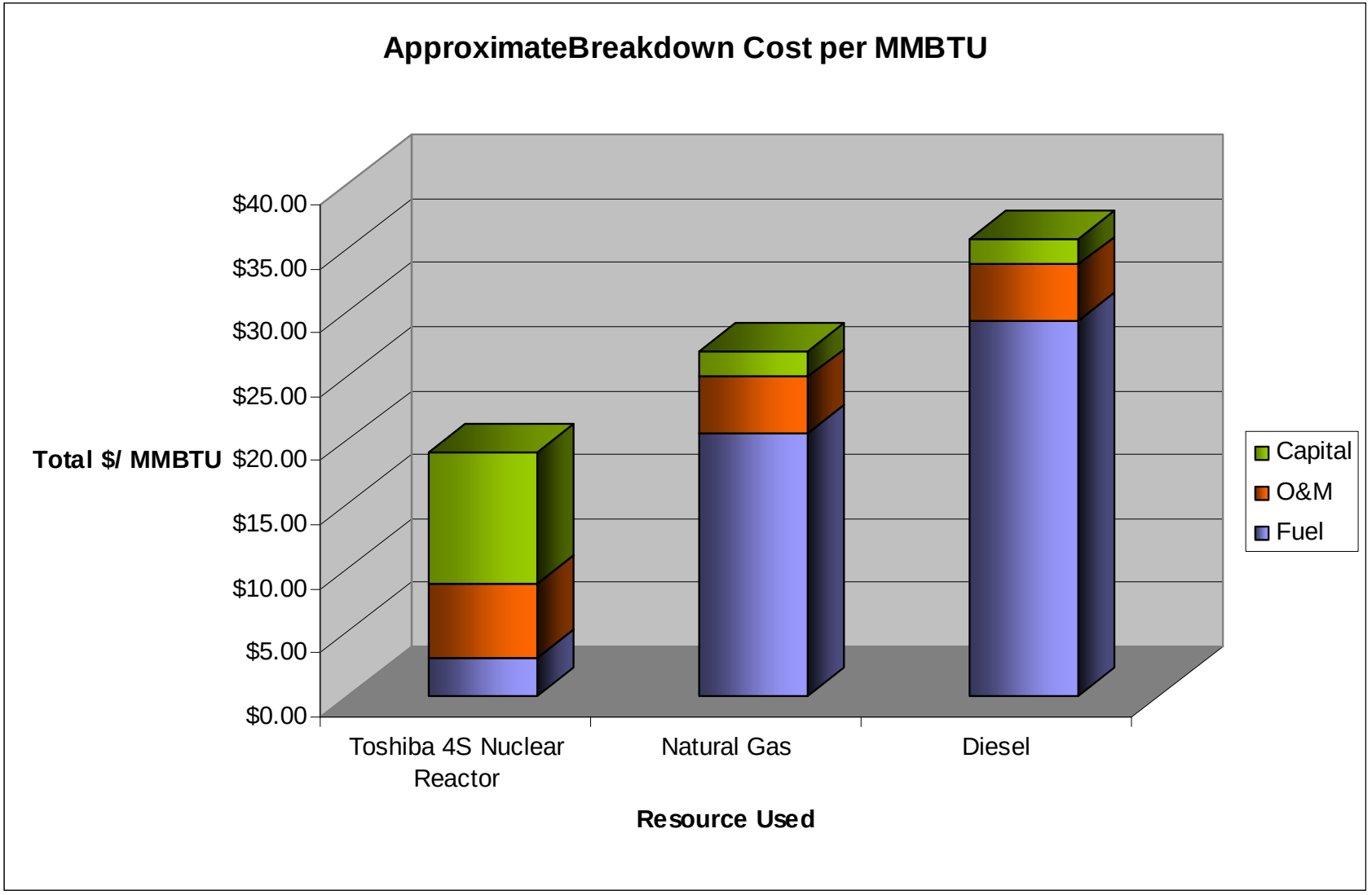
Deployment Strategy

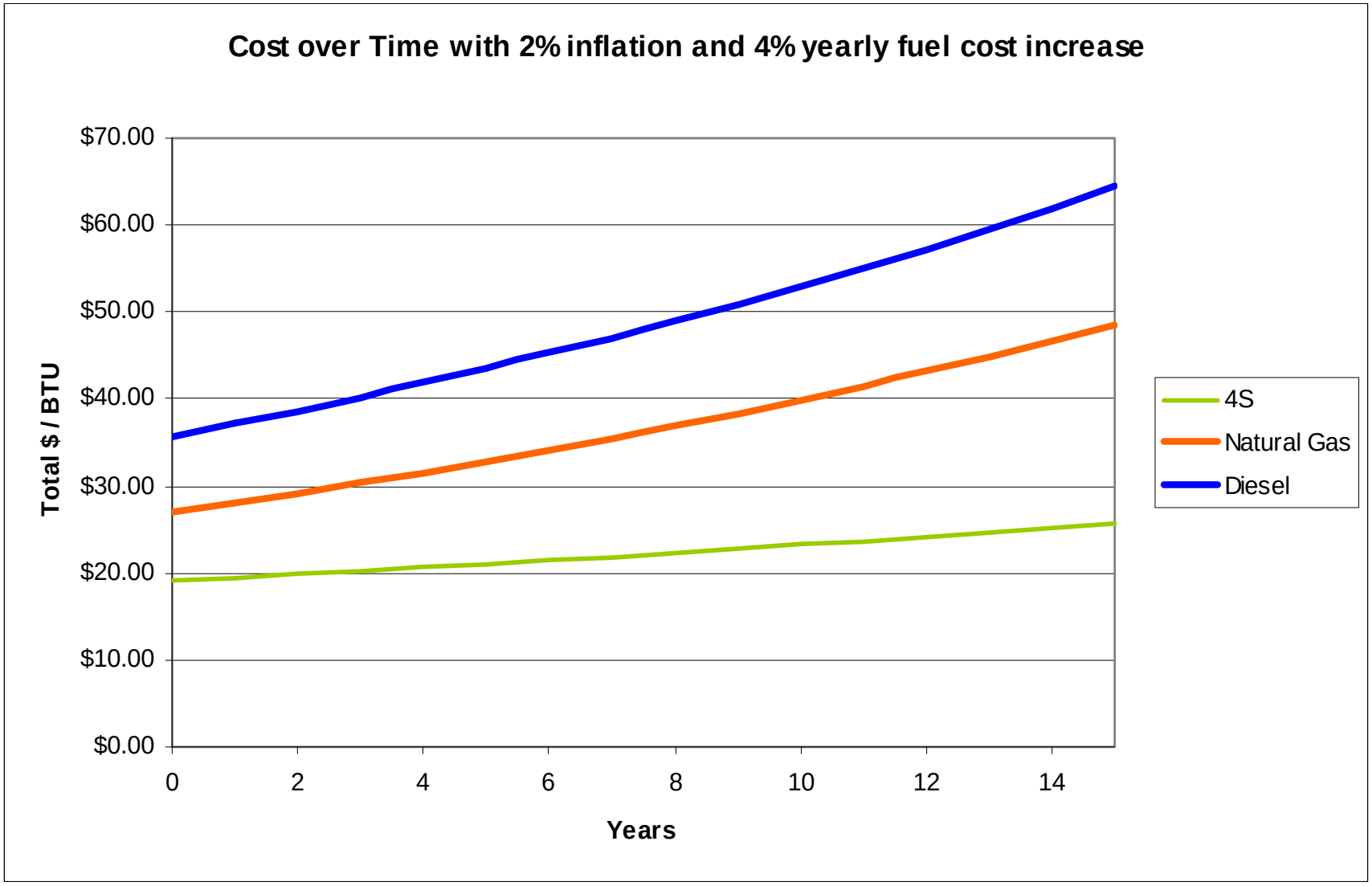
- Developers Risk
  - Takes several years and large expenditure to develop and license a new reactor design and start generating a revenue stream
- Risk Mitigation
  - Time phased costs to achieve these milestones
  - Exit ramps at each milestone
  - As milestones are achieved, oil sands customer commitment deepens
- Oil sands operator risk – limited so that only if successful and other means (i.e., CCS) are less expensive
- Oil sands operator benefits – energy supply diversity ,no GHG emissions

Annual Cost Estimates for 135MW Thermal including Emissions Credits (ERU)

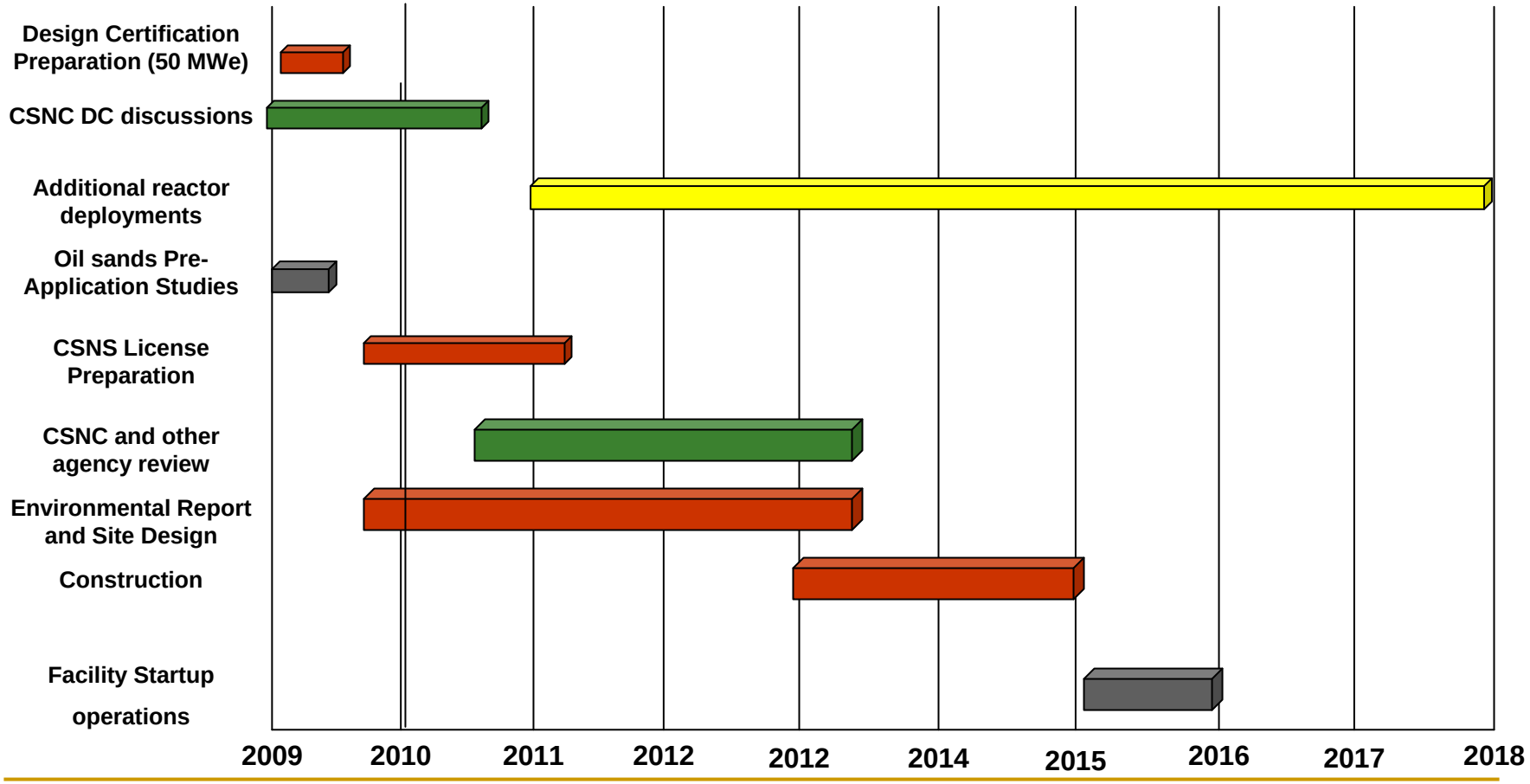



Approximate Breakdown Cost per MWh Electric
Total $/ MW-hr
$140.00
$120.00
$100.00
$80.00
$60.00
$40.00
$20.00
$0.00
Toshiba 4S Nuclear Reactor
Natural Gas
Diesel
Resource Used
Capital
O&M
Fuel


ApproximateBreakdown Cost per MMBTU
Total $/ MMBTU
$40.00
$35.00
$30.00
$25.00
$20.00
$15.00
$10.00
$5.00
$0.00
Toshiba 4S Nuclear Reactor
Natural Gas
Diesel
Resource Used
Capital
O&M
Fuel


Cost over Time with 2% inflation and 4% yearly fuel cost increase
$70.00
$60.00
$50.00
$40.00
$30.00
$20.00
$10.00
$0.00
Total $ / BTU
0
2
4
6
8
10
12
14
Years
4S
Natural Gas
Diesel

Program Schedule



Path Forward

- Identification of a specific site and operations of interest
- Mutual Nondisclosure Agreement
- Joint Phase I Initial Feasibility Study of 4S application to Company facilities
- Memorandum of Understanding
- Phase II Final Feasibility Study
- Letter of Intent
- Submittal of licensing application to the CNSC and other federal and provincial entities

Thank you for your time and interest

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