

## Expansion

Approximately 980 kilometres of new pipeline and additional infrastructure at three existing terminal locations along the existing Trans Mountain Pipeline system between Edmonton, AB and Burnaby, BC

Increased nominal capacity from 300,000 barrels per day up to 890,000 barrels per day

12 new pump stations, 19 new tanks, space for three Aframax vessels at the Westridge Marine Terminal

Customers have signed long-term firm 15- and 20-year contracts with Trans Mountain



## Project Details

Dual-line operation

- o Existing line: refined products, synthetic crude oils, light crude oils
- o New line: heavier oils

860 km of 36-inch and 120 km of 42-inch pipe

Two new delivery lines from the Burnaby Terminal to the Westridge Marine Terminal in Burnaby, BC

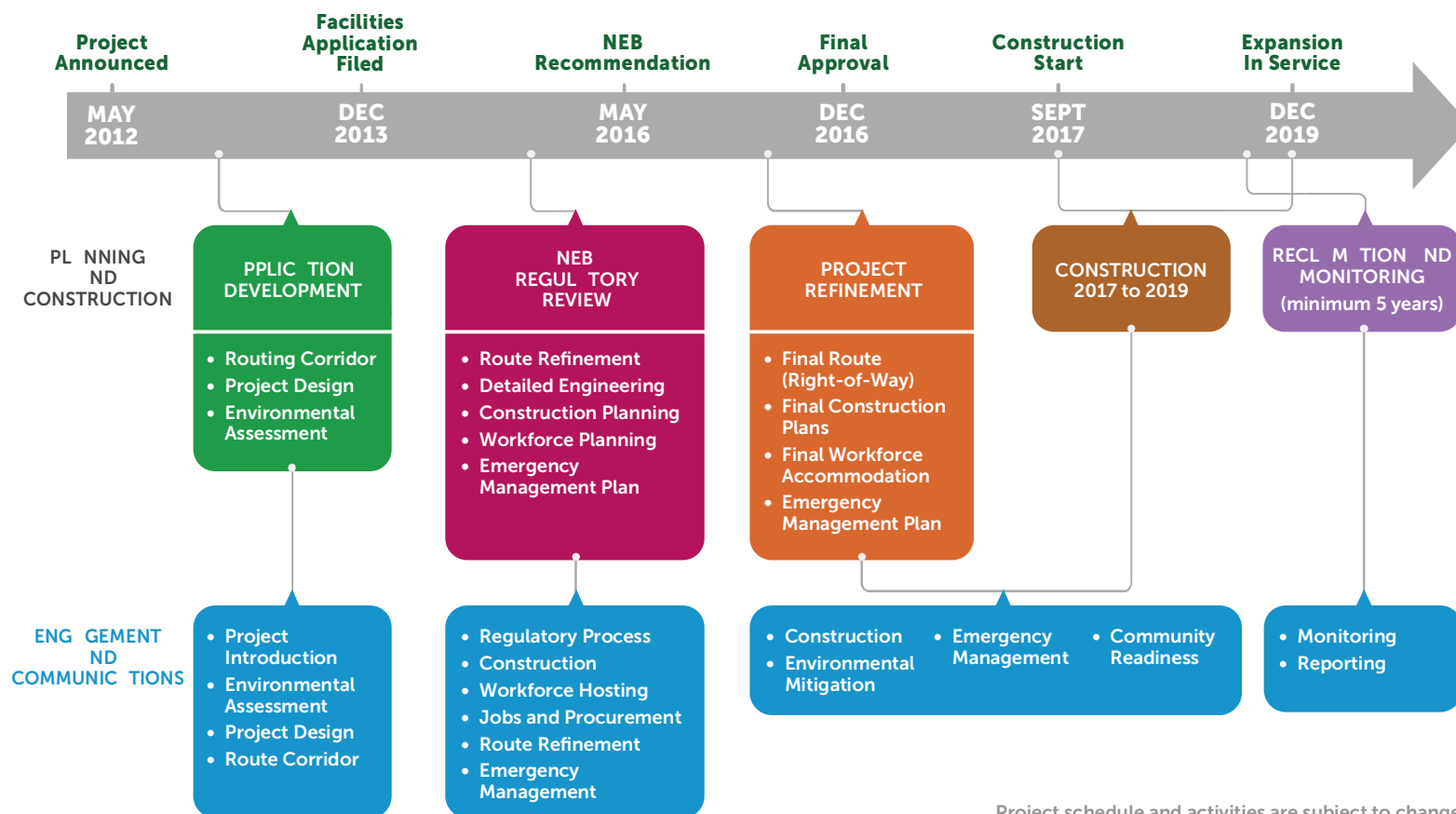
Existing pipelines to be reactivated:

- o Hinton, AB to Hargreaves, BC
- o Darfield, BC to Black Pines, BC

Project cost: approximately \$6.8 billion



# PROJECT SCHEDULE



Project schedule and activities are subject to change

# TRANS MOUNTAIN EXPANSION PROJECT



## PROJECT CHANGES AS A RESULT OF STAKEHOLDER INPUT

Open, extensive and thorough engagement along the pipeline and marine corridors has been an important part of the Project and will continue into construction and operation. The input we gather through our engagement activities helps us create a stronger, safer and more responsive Project.

Changes as a result of stakeholder feedback include:



- An increase in isolation valves on the pipeline resulting in a significant reduction of potential spill volumes
- An increase in pipeline wall thickness in high consequence areas, such as urban locations and at river crossings
- Routing of the pipeline to avoid river crossings at significant fish bearing rivers such as the Fraser River, upper North Thompson, Albreda, Coldwater and Coquihalla River
- Using the Transportation Utility Corridor instead of routing through established neighbourhoods in Edmonton
- Routing around the community of Hinton rather than through the town

- Upsizing of pipe from 36" to 42" between Hargreaves and Darfield, eliminating two pipeline crossings of the Fraser River and significantly reducing the Project power requirements in the North Thompson region
- Routing to avoid environmentally sensitive areas such as Cheam Wetlands
- Burnaby Mountain tunnel route option to avoid adjacent neighbourhoods and minimize community impact
- An investment in Western Canada Marine Response Corporation of more than \$150 million to enhance spill response capabilities along the tanker route, which will double the response capacity and cut in half the delivery time of existing planning standards



## SAFE OPERATIONS AND ENHANCED EMERGENCY MANAGEMENT

Safety is our number one priority. Trans Mountain has a robust Emergency Management Program in place that is required by the National Energy Board (NEB) and complies with all applicable regulations.

### Emergency Management Program (EMP) for TMEP

- Enhance the existing plan through technical assessments, Aboriginal engagement, stakeholder engagement, modelling and field studies
- Develop and implement an industry-leading EMP that
- o Meets all applicable regulations and standards
  - o Complies with NEB conditions and commitments made to communities
  - o Meets Government of BC conditions
  - o Meets Trans Mountain's commitments to Aboriginal communities
  - o Meets Trans Mountain's commitments to stakeholders and communities

### EMP Enhancements as a result of feedback

Supplemental emergency response equipment  
 Pipeline Emergency Response Guidelines for Schools  
 Mutual aid agreement with Kamloops Fire and Rescue and Burrard Inlet industry partners  
 Convergent Volunteer Management Plan  
 Location-specific Geographic Response Plans



### Marine Safety Enhancements

- Facilities designed and operated to meet all Canada Shipping Act marine oil handling facility requirements
- Regulated by NEB and Transport Canada
- Westridge-specific Western Canadian Marine Response Corporation (WCMRC) spill response plan
- WCMRC agreement/plan for oil spill response
- WCMRC enhancements:
- o An investment of more than \$150 million in marine spill response benefiting all waterway users and the entire South Coast of BC
  - o Doubling the spill response capabilities and cutting mandated response times in half
  - o Five new response bases, about 115 new employees and approximately 26 new vessels at strategic locations along BC's southern shipping lane
  - o 24/7 operations at three of the bases, including the new Vancouver Harbour base

## Our Commitment

We will take every possible action to prevent a spill and have developed a number of programs to protect and inspect the Trans Mountain Pipeline

No spill is acceptable, but we have plans to respond, clean up, remediate and learn from every incident should one occur

In the event of a spill, we will examine all aspects of our operations and make modifications wherever possible to prevent a recurrence

## Pipeline Safety

Pipelines remain the safest and most efficient method for transporting petroleum products

As long as pipelines are properly maintained, their lifespan is indefinite

## Pipeline Protection

Our pipeline integrity management includes regular inspection, maintenance and repair programs managed by a dedicated Technical Services team

The pipeline has protective coatings and a cathodic protection system to prevent rust and corrosion

Technology is used to detect changes in pipeline condition and wall thickness

## Damage Prevention

The pipeline is marked and signage along the line is maintained

We conduct regular aerial and ground patrols of the pipeline to look for any irregularities or unauthorized activities along the pipeline corridor

Permits are issued for any ground disturbance activities near the pipeline

“One Call” program ensures the public or an employee can immediately and easily call for a response to a safety concern

Education workshops and information mailouts help keep the public aware of the potential risk of activities near the pipeline corridor