



## Foreign Exchange

CADUSD	Futures market data (current year plus 5 years)
EURUSD	Futures market data (current year plus 5 years)
GBPUSD	Futures market data (current year plus 5 years)

## Oil

Bow River at Hardisty, AB	Equal to WCS price plus 0.40 CAD/bbl
Brent Blend	Futures market data (current year plus 5 years)
Heavy at Hardisty, AB	Calculated from WCS at Hardisty and C5+ at Edmonton
Light Louisiana Sweet (LLS)	Calculated from futures market data (differential to WTI) for the current year plus 5 years
Light Sour (LSB) at Cromer, MB	Calculated from futures market data (differential to WTI and CADUSD) for the current year plus 3 years; then calculated from the differential to WTI and CADUSD taken from the most recent forward settlement value
Light, Sweet at Edmonton, AB	Calculated from futures market data (differential to WTI and CADUSD) for the current year plus 3 years; then calculated from the differential to WTI and CADUSD taken from the most recent forward settlement value
Maya	Relationship to other prices taken from the most recent independent quarterly GLJ price forecast
Medium (Midale) at Cromer, MB	Calculated from futures market data (differential to WTI and CADUSD) for the current year plus 3 years; then calculated from the differential to WTI and CADUSD taken from the most recent forward settlement value
WCS at Hardisty, AB	Calculated from futures market data (differential to WTI and CADUSD) for the current year plus 3 years; then calculated from the differential to WTI and CADUSD taken from the most recent forward settlement value
WTI	Futures market data (current year plus 5 years)

## Gas

AECO/NIT Spot	Futures market data (current year plus 5 years)
Alberta Reference Price (ARP)	Relationship to other prices taken from the most recent GLJ price forecast
Alberta Spot Plant Gate	Equal to AECO/NIT Spot Natural Gas minus typical intra-AB transportation cost
Algonquin City-Gates	Calculated from futures market data (Henry Hub) with a basis taken from the most recent independent quarterly GLJ price forecast
BC Spot Plant Gate	Equal to Station 2 minus typical intra-BC transportation cost
Chicago	Calculated from futures market data (Henry Hub) with a basis taken from the most recent independent quarterly GLJ price forecast
Henry Hub	Futures market data (current year plus 5 years)
National Balancing Point (UK)	Futures market data (current year plus 5 years)
Rockies	Calculated from futures market data (Henry Hub) with a basis taken from the most recent independent quarterly GLJ price forecast
Saskatchewan Spot Plant Gate	Futures market data (TEP) minus typical intra-SK transportation cost
SaskEnergy	Relationship to other prices taken from the most recent GLJ price forecast
Sumas	Calculated from futures market data (Henry Hub) with a basis taken from the most recent independent quarterly GLJ price forecast
Westcoast Station 2	Futures market data (current year plus 5 years)

## NGL

80%-20% E/P Mix at Conway, KS	Equal to Mont Belvieu ethane price minus 1.75 USD/bbl
Butane at Conway, KS	Calculated from relationships to other prices taken from the most recent independent quarterly GLJ price forecast
Butane at Edmonton, AB	Relationship to other prices taken from the most recent independent quarterly GLJ price forecast
Butane at Mont Belvieu, TX	Calculated from relationships to other prices taken from the most recent independent quarterly GLJ price forecast
C5+ (Condensate) at Edmonton, AB	Calculated from futures market data (differential to WTI and CADUSD) for the current year plus 3 years; then calculated from the differential to WTI and CADUSD taken from the most recent forward settlement value
Condensate (C5+) at Conway, KS	Calculated from futures market data for the current year plus 1 year; then calculated from the average differential to WTI of the previous calendar year
Condensate (C5+) at Mont Belvieu, TX	Calculated from futures market data for the current year plus 1 year; then calculated from the average differential to WTI of the previous calendar year
Ethane at Edmonton, AB	Relationship to other prices taken from the most recent independent quarterly GLJ price forecast
Ethane at Mont Belvieu, TX	Calculated from futures market data for the current year plus 1 year; then calculated from the average differential to WTI of the previous calendar year
Iso-Butane at Conway, KS	Calculated from relationships to other prices taken from the most recent independent quarterly GLJ price forecast
Iso-Butane at Mont Belvieu, TX	Calculated from futures market data for the current year plus 1 year; then calculated from the average differential to WTI of the previous calendar year
Normal Butane at Conway, KS	Calculated from futures market data for the current year plus 1 year; then calculated from the average differential to WTI of the previous calendar year
Normal Butane at Mont Belvieu, TX	Calculated from futures market data for the current year plus 1 year; then calculated from the average differential to WTI of the previous calendar year
Propane at Conway, KS	Calculated from futures market data for the current year plus 1 year; then calculated from the average differential to WTI of the previous calendar year
Propane at Edmonton, AB	Relationship to other prices taken from the most recent independent quarterly GLJ price forecast
Propane at Mont Belvieu, TX	Calculated from futures market data for the current year plus 1 year; then calculated from the average differential to WTI of the previous calendar year

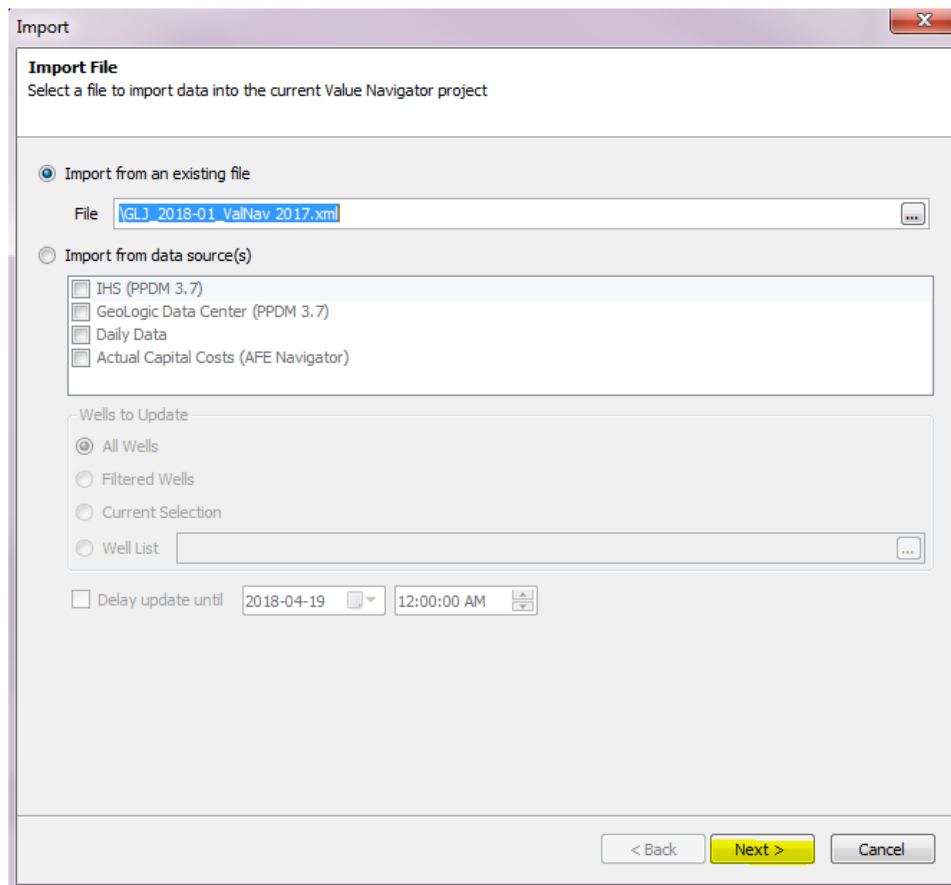
## Other Notes


The annual price represented in year 6 is the simple average of prices in year 5. After that, prices remain flat (these tables contain zero inflation).

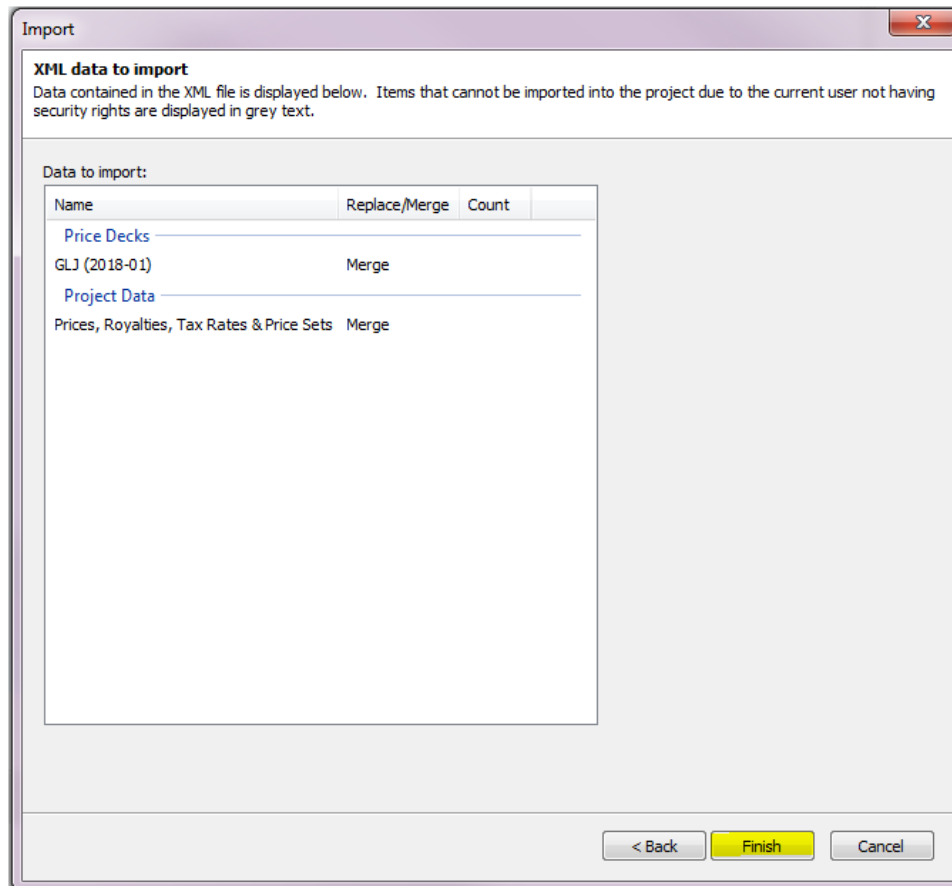
Par, reference and other prices used in royalty calculations use the relationship to other prices are taken from the most recent independent quarterly GLJ price forecast.

## ValNav Import Instructions

1. Open ValNav
2. Select from the menu File -> Import -> File



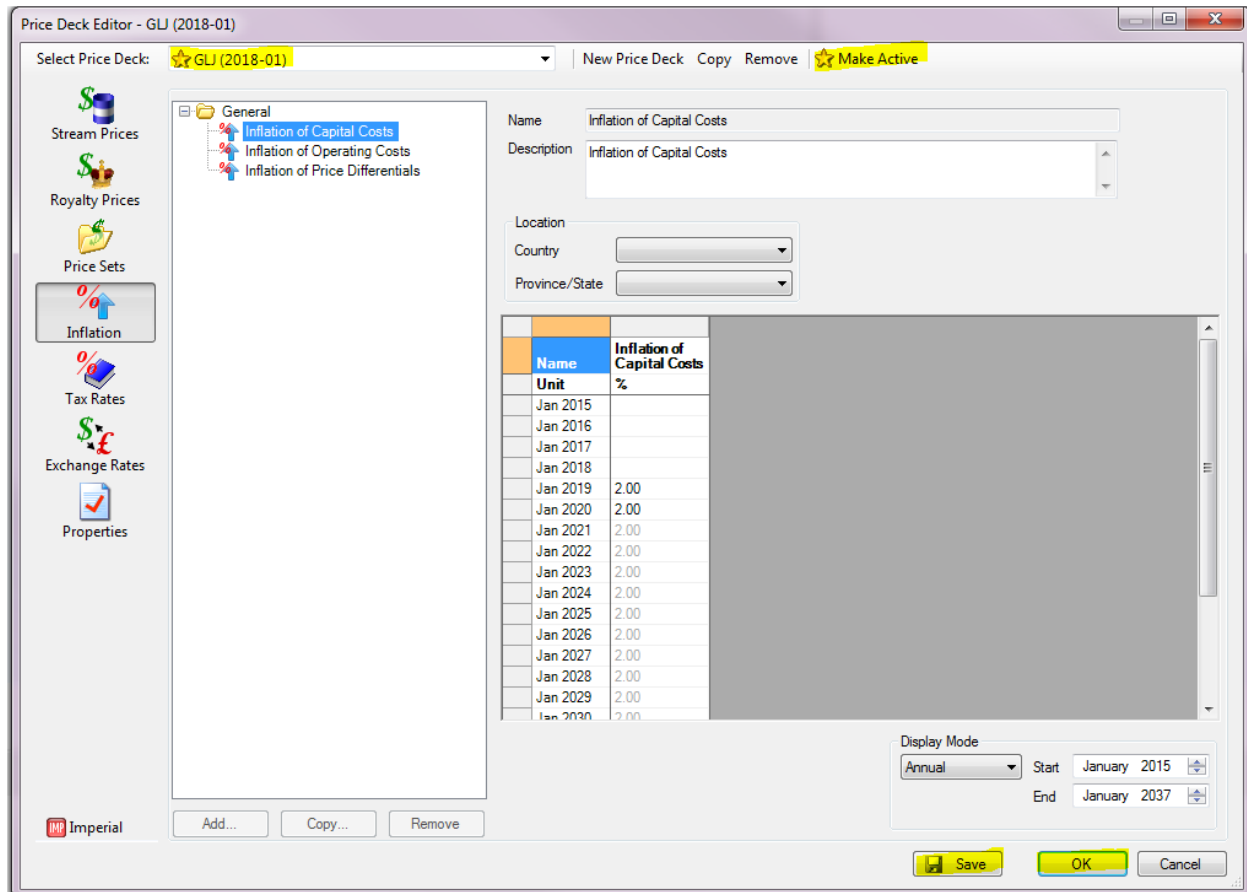
3. Under “Import from an existing file” click 
    - Select the Futures Pricing file for this version of ValNav
  4. Click Next
- continued on next page*



5. Click Finish

6. Select from the menu Tools -> Global Project Data -> Price Decks

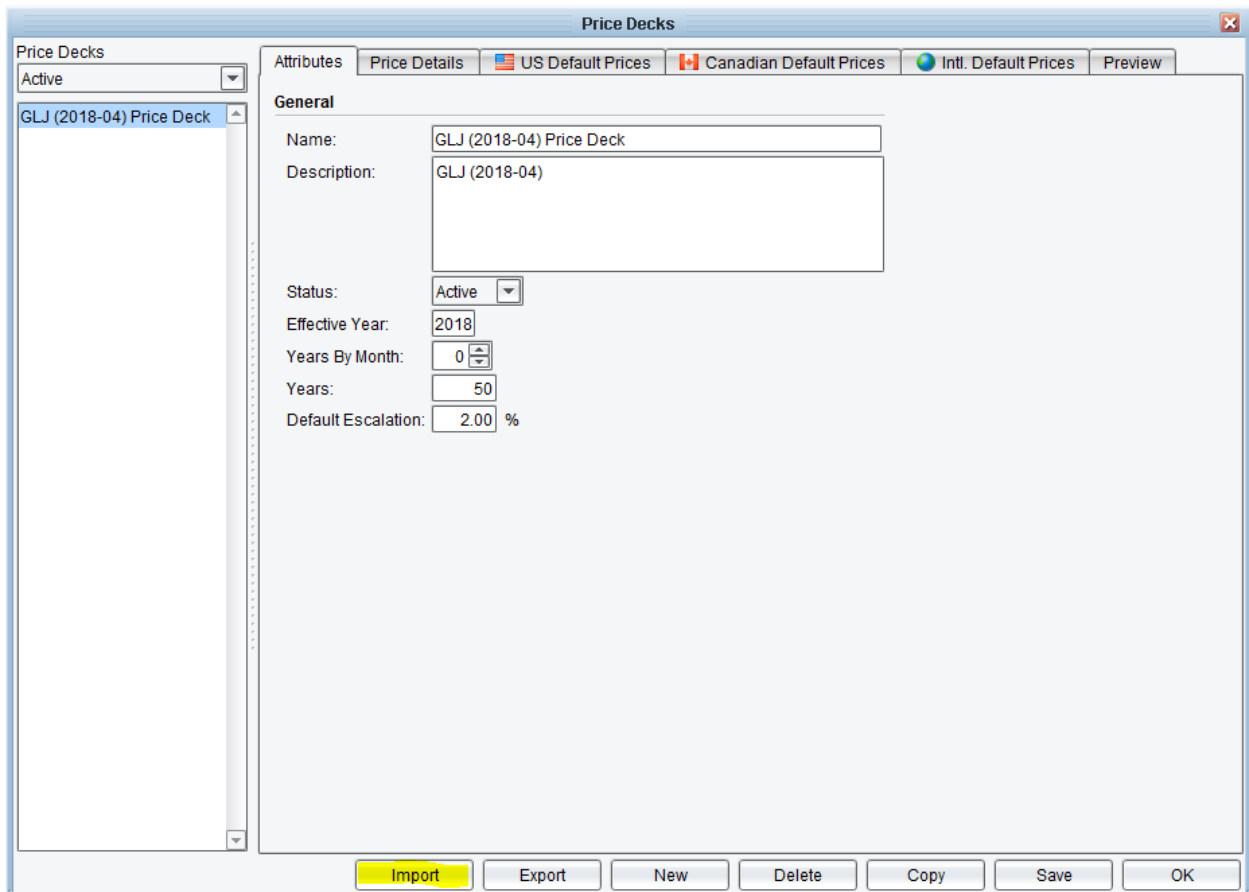
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7. Select the price deck you just imported from “Select Price Deck”
8. Click Make Active
9. Click Save
10. Click OK

## Mosaic Import Instructions

1. Open Mosaic
2. Select from the menu Admin -> Pricing -> Price Decks



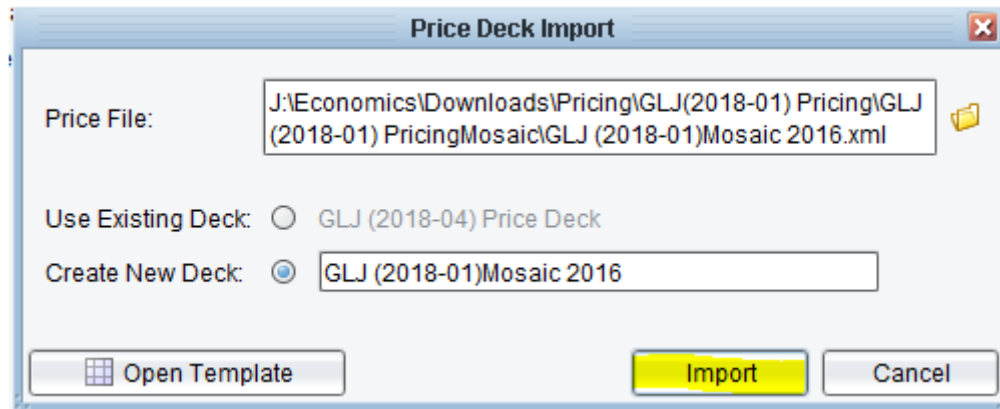
The screenshot shows the 'Price Decks' application window. The title bar reads 'Price Decks'. On the left, there is a tree view under 'Price Decks' with 'Active' selected. Below it, 'GLJ (2018-04) Price Deck' is selected. The main area has tabs for 'Attributes', 'Price Details', 'US Default Prices', 'Canadian Default Prices', 'Intl. Default Prices', and 'Preview'. The 'General' tab is active, showing the following fields:


- Name: GLJ (2018-04) Price Deck
- Description: GLJ (2018-04)
- Status: Active
- Effective Year: 2018
- Years By Month: 0
- Years: 50
- Default Escalation: 2.00 %

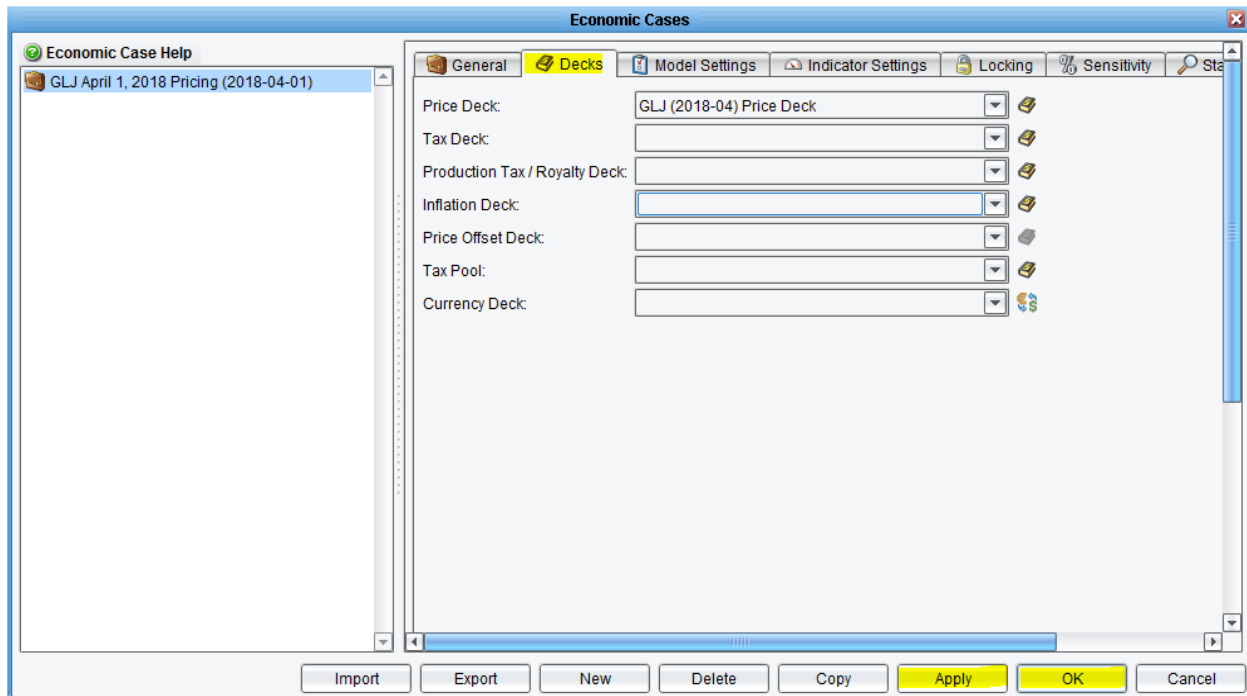
At the bottom of the window, there are buttons for 'Import', 'Export', 'New', 'Delete', 'Copy', 'Save', and 'OK'. The 'Import' button is highlighted in yellow.

3. Click Import
  4. Click Import From File
- continued on next page*





5. Under Price file click 
    - Select the Futures Pricing file for this version of Mosaic
  6. Click Import
  7. Click Save
  8. Click OK
  9. Select Admin -> Economic Cases...
- continued on next page*



10. Select Deck tab
11. Choose Futures Pricing deck from the Price Deck drop-down list
12. Click Apply
13. Click OK