

# INTERIOR ENERGY PROJECT FINANCIAL MODEL

- Financial model developed by AIDEA's head of SETS program
- Vetted by comparison to proposers' models
- Multiple scenarios tested

## Key Model Assumptions for Term Sheets

1. SETS loan payments include principal and no interest for the first five years
2. Prices are levelized (averaged) for the first five years and may change in later years
3. While all term sheets require an expandable plant, this analysis assumes no expansions
4. To lower project cost and risk, the model funds the first \$35 million of AIDEA investment with the capital appropriation even if not sought in the term sheet
5. All SETS funds not used for the LNG Plant would be available for use in various aspects of the distribution system
6. LNG will be trucked by trucks using diesel fuel (higher cost) until LNG tractors are available

## Pentex Term Sheet key assumptions and analysis

1. \$20 million equity provided by Pentex
  - a. Nominal rate of return of 12.5%
  - b. Post-tax rate of 12.5%
  - c. Tax based on realized tax burden with no taxes assumed in first five years
2. \$10 million private debt financed at 8% interest
3. 11% weighted rate of return on private investment (debt and equity)
4. Debt and equity principle paid back over 12 years
5. \$6.5 million annual non-fuel O&M cost
6. LNG liquefaction process requires 10.5% fuel gas

## Spectrum Term Sheet key assumptions and analysis

1. \$20 million equity provided by Spectrum
  - a. Nominal rate of return of 25%
  - b. Post-tax rate of 15%
  - c. Tax based on maximum pre-individual tax burden regardless of actual tax burden
2. No private debt financing
3. 25% weighted rate of return on private investment (all equity)
4. Equity principle payback not in rates
5. \$9.0 million annual non-fuel O&M costs
6. LNG liquefaction process requires 6.0% fuel gas

**MWH Term Sheet key assumptions and analysis**

1. \$21 million equity provided by investor
  - a. Nominal rate of return of 14%
  - b. Post-tax rate of 12%
  - c. Tax based on realized tax burden with some taxes assumed in first five years
2. \$39 million private debt financed at 8% interested
3. 10% weighted rate of return on private investment (debt and equity)
4. Debt and equity principle paid back over 30 years (contingent on matching LNG sales commitments)
5. \$9.1 million annual non-fuel O&M cost
6. LNG liquefaction process requires 10.5% fuel gas

**Table 1: Capital Stack \$MM**

	<b>Pentex</b>	<b>Spectrum</b>	<b>MWH</b>
<b>AIDEA Contribution</b>	<b>\$35.0</b>	<b>\$35.0</b>	<b>\$35.0</b>
<b>AIDEA SETS</b>	<b>\$110.0</b>	<b>\$84.9</b>	<b>\$90.0</b>
<b>Debt</b>	<b>\$10.0</b>	<b>\$0.0</b>	<b>\$53.7</b>
<b>Equity</b>	<b>\$20.0</b>	<b>\$20.0</b>	<b>\$28.9</b>
<b>Total</b>	<b>\$175.0</b>	<b>\$139.9</b>	<b>\$207.6</b>

**Natural gas demand key assumptions**

1. Industrial customers, including GVEA, demand 3 Bcf per year
2. Natural gas utilities’ demand will grow over time
3. Operating gas for regasification is 2% of total LNG demand
4. Operating gas does not include 4% for LNG powered trucks in first five years
5. AIDEA expects the LNG plant to expand to meet demand but in this analysis it is not expanded and demand is capped
6. The LNG plant provides seasonal swing to natural gas utilities so a 9 Bcf plant is capable of supplying 6.6 Bcf per year

**Table 2: Natural Gas Demand (Bcf per year)**

	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
<b>Industrial (includes GVEA)</b>	<b>3.0</b>	<b>3.0</b>	<b>3.0</b>	<b>3.0</b>	<b>3.0</b>
<b>Natural Gas Utilities</b>	<b>1.9</b>	<b>3.5</b>	<b>3.5</b>	<b>3.5</b>	<b>3.5</b>
<b>Operating Gas</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>
<b>Total</b>	<b>4.9</b>	<b>6.7</b>	<b>6.7</b>	<b>6.7</b>	<b>6.7</b>

**Annual IEP Costs & Projected LNG Prices Based on Term Sheets Submitted to AIDEA**

1. All prices are levelized (averaged) for five years
2. Annual costs are a five year average
3. Distribution costs are estimated separately from the term sheet analysis and should be expected to change
4. Prices apply to all preferred customer

**Table 3: Annual Cost \$MM**

	<b>Pentex</b>	<b>Spectrum</b>	<b>MWH</b>
Raw Gas	\$20.8	\$20.8	\$20.8
Fuel Gas	\$2.4	\$1.3	\$2.4
Operating Costs	\$6.5	\$9.0	\$9.1
AIDEA SETS Loan	\$3.7	\$2.8	\$3.0
Private Investment	\$5.3	\$5.0	\$8.9
<b>Total</b>	<b>\$38.7</b>	<b>\$39.0</b>	<b>\$44.3</b>

**Table 4: Cost Components \$/Mcf**

	<b>Pentex</b>	<b>Spectrum</b>	<b>MWH</b>
Raw Gas	\$3.30	\$3.30	\$3.30
Fuel Gas	\$0.39	\$0.21	\$0.39
Operating Costs	\$1.02	\$1.43	\$1.44
AIDEA SETS Loan	\$0.58	\$0.45	\$0.47
Private Investment	\$0.83	\$0.79	\$1.41
Trucking	\$5.01	\$5.01	\$5.01
Distribution	\$4.21	\$4.14	\$4.15

**Table 5: Gas Price \$/Mcf**

	<b>Pentex</b>	<b>Spectrum</b>	<b>MWH</b>
FOB NS Plant	\$6.12	\$6.18	\$7.01
Delivered to FBX	\$11.13	\$11.19	\$12.02
At the Meter	\$15.34	\$15.32	\$16.17

## IEP ESTIMATED HOUSEHOLD SAVINGS BASED ON TERM SHEETS SUBMITTED TO AIDEA

**Table 6: Household Annual Fuel Costs by Month**

	Pentex	Spectrum	MWH	Fuel Oil
Jan	\$455	\$454	\$479	\$994
Feb	\$382	\$381	\$403	\$835
Mar	\$341	\$341	\$360	\$745
Apr	\$210	\$210	\$221	\$459
May	\$117	\$116	\$123	\$255
Jun	\$61	\$61	\$65	\$134
Jul	\$52	\$52	\$55	\$115
Aug	\$82	\$82	\$86	\$178
Sep	\$140	\$140	\$148	\$306
Oct	\$262	\$262	\$277	\$573
Nov	\$376	\$376	\$396	\$822
Dec	\$437	\$437	\$461	\$956
<b>Total</b>	<b>\$2,914</b>	<b>\$2,911</b>	<b>\$3,073</b>	<b>\$6,371</b>

**Table 7: Household Annual Savings by Month**

	Pentex	Spectrum	MWH
Jan	\$539	\$540	\$514
Feb	\$453	\$453	\$432
Mar	\$404	\$405	\$386
Apr	\$249	\$249	\$237
May	\$138	\$138	\$132
Jun	\$73	\$73	\$69
Jul	\$62	\$62	\$59
Aug	\$97	\$97	\$92
Sep	\$166	\$166	\$158
Oct	\$311	\$311	\$297
Nov	\$446	\$446	\$425
Dec	\$518	\$519	\$495
<b>Total</b>	<b>\$3,456</b>	<b>\$3,459</b>	<b>\$3,297</b>
<b>Savings %</b>	<b>54%</b>	<b>54%</b>	<b>52%</b>

Household fuel cost and savings notes:

1. Households estimated to use 190 Mcf of gas annually

2. Fuel oil cost is based on \$4.00 per gallon (\$30.00 per Mcf equivalent)
3. Household costs and savings incorporate improved efficiency of natural gas heaters over fuel oil (95% vs. 85% efficient)
4. Includes all costs to deliver gas to the meter