

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty

DG 21-008

Petition for Approval of a Firm Transportation Agreement with
Tennessee Gas Pipeline Company, LLC

Staff Data Requests - Set 1

Date Request Received: 3/29/21
Request No. Staff 1-1

Date of Response: 4/16/21
Respondent: William R. Killeen

REQUEST:

Ref. Bates p. 12, Description of the TGP Contract. Please provide a description of the major components of Liberty/TGP contract no. 42076 and a copy of the contract.

RESPONSE:

Liberty/TGP Contract no. 42076 is provided at Attachment Staff 1-1. This contract has the following major components:

- Contract Total Quantity (“TQ”): 20,000 Dth per day
- Receipt Point: Dracut, Massachusetts
- Delivery Point(s): Nashua and Manchester, New Hampshire (8,000/12,000, respectively). The Company amended the contract on October 1, 2012, after its acquisition of EnergyNorth from National Grid. The Company does not have any insight as to why the delivery points on the contract originally included Tewksbury, MA, and Dracut, MA, which were delivery points to the former Colonial Gas Company.
- Rate: Currently effective TGP tariff for FT-A service defined as Zone 6 to Zone 6 (the monthly reservation charge is currently \$4.1405/Dth); plus all additional charges and surcharges as per TGP’s then-current FT-A Tariff.
- In-Service Date: January 1, 2003. As stated above, the Company does not have any insight as to why National Grid (KeySpan at the time) amended the delivery points on this contract commencing January 1, 2003, or when/if the contract was restructured previously.
- Term: Primary Term expiration was to October 31, 2010, with renewal rights per Article III, Section 10.4 of the General Terms and Conditions of TGP’s FERC Gas Tariff; extended to October 31, 2015, October 31, 2020, and currently through October 31, 2025.

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The TGP Contract is a standard gas transportation agreement for use under TGP's FT-A rate schedule, therefore all of the industry standard terms and conditions that are contained in TGP's FERC-approved tariff are incorporated into the TGP Contract.

REDACTED

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty

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Staff Data Requests - Set 1

Date Request Received: 3/29/21
Request No. Staff 1-2

Date of Response: 4/16/21
Respondent: William R. Killeen

REQUEST:

Ref. Bates p. 12, Description of the TGP Contract. Please provide a description of the major components of Liberty/TGP contract no. 52694 and a copy of the contract.

RESPONSE:

Liberty does not have a contract with TGP with that referenced number. Liberty assumes Staff is referring to Liberty/TGP Contract No. 72694, a copy of which is provided as Confidential Attachment Staff 1-2. This contract has the following major components:

- Contract Total Quantity (“TQ”): 30,000 Dth per day
- Receipt Point: Dracut, Massachusetts
- Delivery Point: Laconia, New Hampshire
- Rate: As this contract required expansion facilities to be built on the Concord Lateral and FERC approval, a Negotiated Rate Agreement was required. The Negotiated Rate Agreement includes a monthly reservation rate of \$[REDACTED]/Dth, plus the maximum applicable commodity rates currently effective in the TGP tariff for FT-A service defined as Zone 6 to Zone 6; plus all additional charges and surcharges as per TGP’s then-current Tariff for FT-A service.
- In-Service Date: November 1, 2009
- Term: The primary term is 20 years through October 31, 2029, with renewal rights per Article III, Section 10.4 of the General Terms and Conditions of TGP’s FERC Gas Tariff.

Other than the expansion terms and Negotiated Rate Agreement noted above, TGP Contract No. 72694 is a standard gas transportation agreement for use under TGP’s FT-A rate schedule, therefore all of the industry standard terms and conditions apply as contained in TGP’s FERC-approved tariff.

The marked information above and in Confidential Attachment Staff 1-2 is confidential pricing information that is third party pricing information that is “confidential, commercial, or financial

Docket No. DG 21-008 Request No. Staff 1-2 (Redacted)

information” protected from disclosure by RSA 91-A:5, IV. Therefore, pursuant to Puc 203.08(d), the Company has a good faith basis to seek confidential treatment of this information and will submit a motion confirming confidential treatment prior to the final hearing in this docket.

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty

DG 21-008

Petition for Approval of a Firm Transportation Agreement with
Tennessee Gas Pipeline Company, LLC

Staff Technical Session Data Requests - Set 1

Date Request Received: 5/5/21
Request No. Staff TS 1-2

Date of Response: 5/20/21
Respondent: William Killeen

REQUEST:

Reference DR Staff TS1-4.

- a) Please confirm that Liberty has the option to terminate or renew (at the recourse rate) all or a portion of 20,000 Dth of TGP capacity on the Concord Lateral in 2025, and if renewed, Liberty has the same option at the end of each five year extension.
- b) Please confirm that Liberty has the option to terminate or renew (at the recourse rate) all or a portion of 30,000 Dth of TGP capacity on the Concord Lateral in 2029, and if renewed, Liberty has the same option at the end of each five year term.

RESPONSE:

- a) The Company confirms that it has the option to terminate or renew (at the recourse rate) the entire contract volume of 20,000 Dth of TGP capacity on the Concord Lateral after its current expiration date of October 31, 2025. In addition, if renewed, the Company would retain the same option at the end of each five year extension. It has a notice date one year prior, or no later than October 31, 2024. Should no termination notice be sent, the contract is extended for five years, to October 31, 2030, at the then-existing recourse rate. However, should the Company opt to renew for only a portion of the 20,000 Dth, TGP would have the option to put that portion out to bid as generally available capacity.
- b) The 30,000 Dth/day contract on TGP currently has an expiration date of October 31, 2029, with a notice date one year prior, or no later than October 31, 2028. Should no termination notice be sent, the contract is extended for five years, to October 31, 2034, at the then-existing recourse rate. However, should the Company opt to renew for only a portion of the 30,000 Dth, TGP would have the option to put that portion out to bid as generally available capacity.

REDACTED

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Date of Response: 4/16/21
Respondent: William R. Killeen

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RESPONSE:

Liberty does not have a contract with TGP with that referenced number. Liberty assumes Staff is referring to Liberty/TGP Contract No. 72694, a copy of which is provided as Confidential Attachment Staff 1-2. This contract has the following major components:

- Contract Total Quantity (“TQ”): 30,000 Dth per day
- Receipt Point: Dracut, Massachusetts
- Delivery Point: Laconia, New Hampshire
- Rate: As this contract required expansion facilities to be built on the Concord Lateral and FERC approval, a Negotiated Rate Agreement was required. The Negotiated Rate Agreement includes a monthly reservation rate of \$██████/Dth, plus the maximum applicable commodity rates currently effective in the TGP tariff for FT-A service defined as Zone 6 to Zone 6; plus all additional charges and surcharges as per TGP’s then-current Tariff for FT-A service.
- In-Service Date: November 1, 2009
- Term: The primary term is 20 years through October 31, 2029, with renewal rights per Article III, Section 10.4 of the General Terms and Conditions of TGP’s FERC Gas Tariff.

Other than the expansion terms and Negotiated Rate Agreement noted above, TGP Contract No. 72694 is a standard gas transportation agreement for use under TGP’s FT-A rate schedule, therefore all of the industry standard terms and conditions apply as contained in TGP’s FERC-approved tariff.

The marked information above and in Confidential Attachment Staff 1-2 is confidential pricing information that is third party pricing information that is “confidential, commercial, or financial

Docket No. DG 21-008 Request No. Staff 1-2 (Redacted)

information” protected from disclosure by RSA 91-A:5, IV. Therefore, pursuant to Puc 203.08(d), the Company has a good faith basis to seek confidential treatment of this information and will submit a motion confirming confidential treatment prior to the final hearing in this docket.

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DG 21-008

Petition for Approval of a Firm Transportation Agreement with
Tennessee Gas Pipeline Company, LLC

Staff Data Requests - Set 1

Date Request Received: 3/29/21
Request No. Staff 1-5

Date of Response: 4/16/21
Respondent: Francisco C. DaFonte

REQUEST:

Ref. Bates p. 18. Absent the TGP Contract, the Company's calculation of Design Day resource deficiency is 12,585 Dth in 2021/22. What is the minimum on-system capital investment needed to address the 2021/22 deficiency? Please describe the components of the required capital investments, estimated costs and construction time line included in the calculation of the minimum investment calculation.

RESPONSE:

The Company did not conduct the requested analysis (i.e., the minimum on-system capital investment needed to address the 2021/22 deficiency). The primary goal of the Company's resource planning process is to provide reliable service in a cost-effective manner to customers that depend on that service during extreme weather events. The provision of that service is based on a capital-intensive infrastructure that is not evaluated on a year-to-year basis, but rather over a planning horizon.

As detailed below, the Company's resource planning process and analysis of the 20-year contract for capacity on Tennessee Gas Pipeline ("TGP") and the associated on-system capital investment is based on: (i) existing and long-term customer demand; (ii) existing gas supply portfolio; and (iii) an evaluation of the two TGP capacity options.

Specifically, the decision by the Company to contract for 40,000 Dth/day of TGP capacity is based on the following:

- Growing demand for natural gas service
 - Over the 2012 to 2019 time period, the Company has added over 10,000 customers, an increase of 11% (see Bates 008).
 - During the 2021/22 to 2039/40 period, the Company forecasts its Design Day demand to increase by a compound annual growth rate of 1.4% (see Bates 015).
 - There are certain parts of the Company's service territory that are high growth areas, such as Nashua, Manchester, Londonderry, and surrounding towns (see Bates 023).

Docket No. DG 21-008 Request No. Staff 1-5

- Existing gas supply portfolio
 - The Company’s current resource portfolio is not adequate to meet existing and forecasted demand. Specifically, as shown on Table 2 on Bates 018, the Company has an immediate (i.e., 2021/22) deficiency of over 12,000 Dth on Design Day, and by 2038/39 that deficiency increases to over 67,000 Dth.
 - The Company recognizes there is uncertainty with any forecast. Therefore, it concluded that adding a 40,000 Dth/day contract with TGP to the existing resource portfolio meets part of the forecasted deficiency, and the resulting overall resource portfolio provides Liberty with the flexibility to address changes in demand. For example, the Company has capacity contracts with staggered termination dates should demand not materialize as forecasted, and the Company could develop on-system resources should demand meet or exceed projections. See also, Bates 033 and the responses to Staff 1-4 and PLAN 1-1.
- TGP capacity options
 - The Company evaluated two contracting alternatives with TGP:
 - Under the first alternative, TGP would deliver 20,000 Dth/day to Nashua and 20,000 Dth/day to Manchester (the “TGP Nashua/Manchester Alternative”).
 - Under the second alternative, TGP would deliver 40,000 Dth/day to Londonderry (the “TGP Londonderry Alternative”).
 - Under either of the TGP alternatives, the Company would need to execute a 20-year contract for pipeline capacity, which is similar to contracts signed by other New England local distribution companies for capacity on TGP.
 - In addition, either of the TGP alternatives would require TGP and/or the Company to construct facilities to optimize the resource portfolio.
 - The TGP Nashua/Manchester Alternative requires TGP to “loop” the existing Nashua/Hudson Lateral, which traverses densely populated neighborhoods. In addition, the Company would need to complete certain on-system facilities.
 - The TGP Londonderry Alternative would not require any facilities on TGP, but the Company would need to construct certain on-system facilities.
 - Based on the Company’s evaluation of the TGP alternatives over a longer term planning horizon, the Company concluded that the TGP Londonderry Alternative provided customers with a lower cost and more qualitative benefits as discussed on Bates 023 through 030.

The Company provided an outline of the phased-in approach regarding the on-system investments and associated timing of those investments associated with the TGP Londonderry Alternative in footnote 32 on Bates 035. In Table Staff 1-5 below, the Company provides more detail regarding the on-system project components and timing of the design and construction phases associated with the TGP Londonderry Alternative.

Docket No. DG 21-008 Request No. Staff 1-5

Table Staff 1-5

| Project Components | Design | Construction | Investment |
|--|-----------------|---------------------|-------------------|
| Rebuild Candia Road, Manchester M&R Station | 2021: \$300k | 2022: \$4.2M | \$4.5M |
| Uprate Manchester Feeder to 185 psig | 2022: \$300k | 2023: \$700k | \$1M |
| New Londonderry M&R Station, Merrimack Station | 2021: \$300k | 2022: \$4.5M | \$4.8M |
| 10.5 miles of New Feeder Londonderry to Nashua | 2021/22: \$850k | 2022/24: \$39.35M | \$40.2M |

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Staff Technical Session Data Requests - Set 1

Date Request Received: 5/5/21
Request No. Staff TS 1-4

Date of Response: 5/20/21
Respondent: Francisco C. DaFonte

REQUEST:

Reference Staff TS1-5, OCA 1-13 & Testimony Bates page 26.

For each of the following phases of the on-system enhancements, please provide engineering plans with updated cost estimates, timeline, and the incremental increase in capacity that will realized:

- a) Granite Ridge Station
- b) Brown Avenue pipeline and regulator
- c) Daniel Webster Highway Merrimack Station in Manchester
- d) Budweiser line in Nashua

RESPONSE:

The Company has not created any updated engineering plans, cost estimates, or timelines beyond what has been provided in the Company's response to OCA 1-13.

- a) The Granite Ridge Station is the beginning of the proposed on-system enhancement facilities. Therefore its capacity is the sum of items "b" through "d."
- b) Upon its completion, the Brown Ave pipeline and regulator will immediately provide 120 dekatherms per hour of capacity.
- c) Upon its completion, the Daniel Webster Highway Merrimack Station will immediately provide 235 dekatherms per hour of capacity.
- d) Upon its completion, the Budweiser line will immediately provide 1,100 dekatherms per hour of capacity.

Note that all capacity calculations above are based on current customer count and geographic usage locations. By nature of the on-system enhancement location in the gas network, these facilities will be able to support additional future customer growth at the edges of the current distribution system.

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Discount Cash Flow Annalysis for TGP Contract

| | |
|--|--------------|
| Capital Cost Direct (12/31/19 Rate Base) | \$50,500,000 |
| Required Return (pre tax) | 8.76% |
| Depreciation | 1,262,500 |
| Property tax rate | 1.94% |
| Insurance rate | 0.10% |

Assumptions:
 Annual Savings the difference between Contract rate and indicative rate for lowest cost alternative
 Liberty Contract related projects in service year 1
 Required return - DG 20-105 Settlement Agreement

NPV (Delta yrs 1-10, discount rate 10.15%)
 NPV (Delta yrs 1-20, discount rate 10.15%)

| Year | IRS MACRS Rates | IRS MACRS Table | Book Depr (40 yrs/2.5%) | Delta Book less Tax | Tax Rate | Deferred Inc Tax | Accumulated Deferred Inc Tax | Rate Base | Required Return | Property Tax | Insurance | Revenue Requirement | Annual Savings | Delta Rev Req less Revenue |
|------|-----------------------|-----------------------|-------------------------------|---------------------------|-------------|---------------------|------------------------------------|--------------|--------------------|-----------------|-----------|------------------------|----------------|----------------------------------|
| | | | | | | | | 50,500,000 | | 1.94% | 0.10% | | | |
| 1 | 5.00% | 2,525,000 | 1,262,500 | (1,262,500) | 27% | (341,885) | (341,885) | 48,895,615 | \$4,352,241 | \$978,185 | \$50,500 | \$6,643,426 | | |
| 2 | 9.50% | 4,797,500 | 1,262,500 | (3,535,000) | 27% | (957,278) | (1,299,163) | 46,675,837 | \$4,184,792 | \$947,108 | \$50,500 | \$6,444,900 | | |
| 3 | 8.55% | 4,317,750 | 1,262,500 | (3,055,250) | 27% | (827,362) | (2,126,525) | 44,585,975 | \$3,996,086 | \$904,111 | \$50,500 | \$6,213,197 | | |
| 4 | 7.70% | 3,888,500 | 1,262,500 | (2,626,000) | 27% | (711,121) | (2,837,646) | 42,612,355 | \$3,818,158 | \$863,630 | \$50,500 | \$5,994,788 | | |
| 5 | 6.93% | 3,499,650 | 1,262,500 | (2,237,150) | 27% | (605,820) | (3,443,466) | 40,744,034 | \$3,649,931 | \$825,401 | \$50,500 | \$5,788,332 | | |
| 6 | 6.23% | 3,146,150 | 1,262,500 | (1,883,650) | 27% | (510,092) | (3,953,558) | 38,971,442 | \$3,490,506 | \$789,212 | \$50,500 | \$5,592,718 | | |
| 7 | 5.90% | 2,979,500 | 1,262,500 | (1,717,000) | 27% | (464,964) | (4,418,522) | 37,243,978 | \$3,337,249 | \$754,877 | \$50,500 | \$5,405,126 | | |
| 8 | 5.90% | 2,979,500 | 1,262,500 | (1,717,000) | 27% | (464,964) | (4,883,485) | 35,516,515 | \$3,185,968 | \$721,416 | \$50,500 | \$5,220,384 | | |
| 9 | 5.91% | 2,984,550 | 1,262,500 | (1,722,050) | 27% | (466,331) | (5,349,816) | 33,787,684 | \$3,034,627 | \$687,955 | \$50,500 | \$5,035,582 | | |
| 10 | 5.90% | 2,979,500 | 1,262,500 | (1,717,000) | 27% | (464,964) | (5,814,780) | 32,060,220 | \$2,883,286 | \$654,467 | \$50,500 | \$4,850,753 | | |
| 11 | 5.91% | 2,984,550 | 1,262,500 | (1,722,050) | 27% | (466,331) | (6,281,111) | 30,331,389 | \$2,731,945 | \$621,006 | \$50,500 | \$4,665,951 | | |
| 12 | 5.90% | 2,979,500 | 1,262,500 | (1,717,000) | 27% | (464,964) | (6,746,075) | 28,603,925 | \$2,580,604 | \$587,519 | \$50,500 | \$4,481,123 | | |
| 13 | 5.91% | 2,984,550 | 1,262,500 | (1,722,050) | 27% | (466,331) | (7,212,406) | 26,875,094 | \$2,429,263 | \$554,058 | \$50,500 | \$4,296,321 | | |
| 14 | 5.90% | 2,979,500 | 1,262,500 | (1,717,000) | 27% | (464,964) | (7,677,370) | 25,147,630 | \$2,277,922 | \$520,571 | \$50,500 | \$4,111,492 | | |
| 15 | 5.91% | 2,984,550 | 1,262,500 | (1,722,050) | 27% | (466,331) | (8,143,701) | 23,418,799 | \$2,126,581 | \$487,110 | \$50,500 | \$3,926,690 | | |
| 16 | 2.95% | 1,489,750 | 1,262,500 | (227,250) | 27% | (61,539) | (8,205,240) | 22,094,760 | \$1,992,905 | \$453,622 | \$50,500 | \$3,759,527 | | |
| 17 | | | 1,262,500 | 1,262,500 | 27% | 341,885 | (7,863,355) | 21,174,145 | \$1,894,618 | \$427,976 | \$50,500 | \$3,635,593 | | |
| 18 | | | 1,262,500 | 1,262,500 | 27% | 341,885 | (7,521,470) | 20,253,530 | \$1,813,996 | \$410,143 | \$50,500 | \$3,537,139 | | |
| 19 | | | 1,262,500 | 1,262,500 | 27% | 341,885 | (7,179,585) | 19,332,915 | \$1,733,374 | \$392,311 | \$50,500 | \$3,438,685 | | |
| 20 | | | 1,262,500 | 1,262,500 | 27% | 341,885 | (6,837,700) | 18,412,300 | \$1,652,752 | \$374,479 | \$50,500 | \$3,340,230 | | |

Required Return (Settlement)

| | Capital Structure | Cost of Capital | Weighted Cost of Capital | Tax Rate | Pre-Tax |
|--------|----------------------|--------------------|-----------------------------|-------------|--------------|
| Equity | 52.00% | 9.30% | 4.84% | 27.08% | 6.64% |
| Debt | 48.00% | 4.420% | 2.12% | | 2.12% |
| | <u>100.00%</u> | | <u>6.96%</u> | | <u>8.76%</u> |

Discount Cash Flow Annalysis for TGP Contract

| | |
|--|--------------|
| Capital Cost Direct (12/31/19 Rate Base) | \$50,500,000 |
| Required Return (pre tax) | 8.76% |
| Depreciation | 1,262,500 |
| Property tax rate | 1.94% |
| Insurance rate | 0.10% |

Assumptions:
 Annual Savings the difference between Contract rate and indicative rate for lowest cost alternative
 Liberty Contract related projects in service year 1
 Liberty Retires projects in year 20
 Required return - DG 20-105 Settlement Agreement

NPV (Delta yrs 1-10, discount rate 10.15%)
 NPV (Delta yrs 1-20, discount rate 10.15%)



| Year | IRS MACRS Rates | IRS MACRS Table | Book Depr (40 yrs/2.5%) | Delta Book less Tax | Tax Rate | Deferred Inc Tax | Accumulated Deferred Inc Tax | Rate Base | Required Return | Property Tax | Insurance | Revenue Requirement | Annual Savings | Delta Rev Req less Revenue |
|------|-----------------------|-----------------------|-------------------------------|---------------------------|-------------|---------------------|------------------------------------|--------------|--------------------|-----------------|-----------|------------------------|----------------|----------------------------------|
| | | | | | | | | 50,500,000 | | 1.94% | 0.10% | | | |
| 1 | 5.00% | 2,525,000 | 1,262,500 | (1,262,500) | 27% | (341,885) | (341,885) | 48,895,615 | \$4,352,241 | \$978,185 | \$50,500 | \$6,643,426 | | |
| 2 | 9.50% | 4,797,500 | 1,262,500 | (3,535,000) | 27% | (957,278) | (1,299,163) | 46,675,837 | \$4,184,792 | \$947,108 | \$50,500 | \$6,444,900 | | |
| 3 | 8.55% | 4,317,750 | 1,262,500 | (3,055,250) | 27% | (827,362) | (2,126,525) | 44,585,975 | \$3,996,086 | \$904,111 | \$50,500 | \$6,213,197 | | |
| 4 | 7.70% | 3,888,500 | 1,262,500 | (2,626,000) | 27% | (711,121) | (2,837,646) | 42,612,355 | \$3,818,158 | \$863,630 | \$50,500 | \$5,994,788 | | |
| 5 | 6.93% | 3,499,650 | 1,262,500 | (2,237,150) | 27% | (605,820) | (3,443,466) | 40,744,034 | \$3,649,931 | \$825,401 | \$50,500 | \$5,788,332 | | |
| 6 | 6.23% | 3,146,150 | 1,262,500 | (1,883,650) | 27% | (510,092) | (3,953,558) | 38,971,442 | \$3,490,506 | \$789,212 | \$50,500 | \$5,592,718 | | |
| 7 | 5.90% | 2,979,500 | 1,262,500 | (1,717,000) | 27% | (464,964) | (4,418,522) | 37,243,978 | \$3,337,249 | \$754,877 | \$50,500 | \$5,405,126 | | |
| 8 | 5.90% | 2,979,500 | 1,262,500 | (1,717,000) | 27% | (464,964) | (4,883,485) | 35,516,515 | \$3,185,968 | \$721,416 | \$50,500 | \$5,220,384 | | |
| 9 | 5.91% | 2,984,550 | 1,262,500 | (1,722,050) | 27% | (466,331) | (5,349,816) | 33,787,684 | \$3,034,627 | \$687,955 | \$50,500 | \$5,035,582 | | |
| 10 | 5.90% | 2,979,500 | 1,262,500 | (1,717,000) | 27% | (464,964) | (5,814,780) | 32,060,220 | \$2,883,286 | \$654,467 | \$50,500 | \$4,850,753 | | |
| 11 | 5.91% | 2,984,550 | 1,262,500 | (1,722,050) | 27% | (466,331) | (6,281,111) | 30,331,389 | \$2,731,945 | \$621,006 | \$50,500 | \$4,665,951 | | |
| 12 | 5.90% | 2,979,500 | 1,262,500 | (1,717,000) | 27% | (464,964) | (6,746,075) | 28,603,925 | \$2,580,604 | \$587,519 | \$50,500 | \$4,481,123 | | |
| 13 | 5.91% | 2,984,550 | 1,262,500 | (1,722,050) | 27% | (466,331) | (7,212,406) | 26,875,094 | \$2,429,263 | \$554,058 | \$50,500 | \$4,296,321 | | |
| 14 | 5.90% | 2,979,500 | 1,262,500 | (1,717,000) | 27% | (464,964) | (7,677,370) | 25,147,630 | \$2,277,922 | \$520,571 | \$50,500 | \$4,111,492 | | |
| 15 | 5.91% | 2,984,550 | 1,262,500 | (1,722,050) | 27% | (466,331) | (8,143,701) | 23,418,799 | \$2,126,581 | \$487,110 | \$50,500 | \$3,926,690 | | |
| 16 | 2.95% | 1,489,750 | 1,262,500 | (227,250) | 27% | (61,539) | (8,205,240) | 22,094,760 | \$1,992,905 | \$453,622 | \$50,500 | \$3,759,527 | | |
| 17 | | | 1,262,500 | 1,262,500 | 27% | 341,885 | (7,863,355) | 21,174,145 | \$1,894,618 | \$427,976 | \$50,500 | \$3,635,593 | | |
| 18 | | | 1,262,500 | 1,262,500 | 27% | 341,885 | (7,521,470) | 20,253,530 | \$1,813,996 | \$410,143 | \$50,500 | \$3,537,139 | | |
| 19 | | | 1,262,500 | 1,262,500 | 27% | 341,885 | (7,179,585) | 19,332,915 | \$1,733,374 | \$392,311 | \$50,500 | \$3,438,685 | | |
| 20 | | | 26,512,500 | 26,512,500 | 27% | 7,179,585 | 0 | 0 | \$846,531 | \$374,479 | \$50,500 | \$27,784,010 | | |

Required Return (Settlement)

| | Capital Structure | Cost of Capital | Weighted Cost of Capital | Tax Rate | Pre-Tax |
|--------|----------------------|--------------------|-----------------------------|-------------|--------------|
| Equity | 52.00% | 9.30% | 4.84% | 27.08% | 6.64% |
| Debt | 48.00% | 4.420% | 2.12% | | 2.12% |
| | <u>100.00%</u> | | <u>6.96%</u> | | <u>8.76%</u> |