



# **Population and Economic Forecast and Selection of Discount Rate**

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# Population Forecast

- Used in the baseline forecast of greenhouse gas emissions and in evaluating mitigation options
- Discussed in several WGs considering following sources:
  - **EIA**
  - **Charles Colgan, University of Southern Maine**
  - **Maine State Planning Office**



# Population Forecasts

|                 | EIA's Annual Energy Outlook 2004 [1] | Charles Colgan, USM [2,3] | Maine State Planning Office [2] |
|-----------------|--------------------------------------|---------------------------|---------------------------------|
| Forecast Period | 2004-2025                            | 2004-2025                 | 2004-2017                       |
| POP (low)       | 0.60%                                | 1.00%                     |                                 |
| POP (med)       | 0.80%                                | 1.15%                     | 0.70%                           |
| POP (high)      | 1.00%                                | 1.30%                     |                                 |

[1] National

[2] State of Maine

[3] Preliminary



# Population Forecast

- The Building Facilities Manufacturing Work Group felt most comfortable with the Charles Colgan's mid-range forecast
  - **used Maine data**
  - **covered the time period of the analysis**
- This was supported by the Energy and Solid Waste Working Group.



# Economic Forecast

- Used in the baseline forecast of greenhouse gas emissions and in evaluating mitigation options
- Discussed in several WGs considering following sources:
  - **EIA**
  - **Charles Colgan, University of Southern Maine**
  - **Maine State Planning Office**



# Economic Forecasts

|                 | EIA's Annual Energy Outlook 2004 [1] | Charles Colgan, USM [2,3] | Maine State Planning Office [2,3] |
|-----------------|--------------------------------------|---------------------------|-----------------------------------|
| Forecast Period | 2004-2025                            | 2004-2025                 | 2004-2007                         |
| GDP (low)       | 2.40%                                | 3.0%                      |                                   |
| GDP (med)       | 2.97%                                | 3.5%                      | 2.85%                             |
| GDP (high)      | 3.45%                                | 4.0%                      |                                   |

[1] National Gross Domestic Product

[2] Gross State Product

[3] Preliminary



# Economic Forecast

- The BFM Work Group felt most comfortable with the Charles Colgan's mid-range forecast
  - **used Maine data**
  - **covered the time period of the analysis**
  - **However, interested in breaking out industrial component of GSP forecast (no growth expected)**
- This was supported by the Energy and Solid Waste Working Group.



# Discount Rate

- The Maine DEP has recommended the use of a consistent discount rate across all sectors (e.g., transportation, industry, residential, etc.)
- Consistency is important for policy analysis as it allows decision-makers to compare the cost-effectiveness of different measures across various sectors.





# Discount Rate

| Source                                       | Rate       |
|--|------------|
| Federal Reserve Prime Rate (5 yr avg)        | 6.58%      |
| Federal Reserve Prime Rate (Current)         | 4.12%      |
| OMB recommendation for regulatory analysis   | 7%         |
| Approx. State discount rate                  | 5%         |
| Maine recommendation for regulatory analysis | None known |
| Rhode Island's Legislature's Policy Offices  | 5%         |



# Discount Rate

- BFM WG pointed out that the private sector uses higher discount rates to evaluate investments
  - **capital constraints**
  - **preference for short payback periods**
  - **high internal rates of return that are often required**
- Application of a private discount rate might be more appropriate in the future during the stage of final program design
  - **Current process will not determine sector making investment (i.e., gov't or private)**