TRANSPORTATION - Base Case*								
Policies Included	**Collection Point**	**Sector Allocation**	**Timing**	**Comments/Caveats**	**COST**	**Starting Point (2004)**	**2020 Demand & Growth Rate w/out Alternative Scenario**	**2020 GHG Impact w/out Alternative Scenario**
Projected Demand						**127.8 millions Barrels** [100.8 million Barrels motor gasoline and 26.3 million Barrels Diesel fuel] (Source: BPU Goals and Objectives Draft Document)	**159.6 million Barrels** [126 million Barrels motor gasoline and 33.6 million Barrels Diesel fuel] (Source: BPU Goals and Objectives Draft Document)	**TOTAL IMPACT 67.64 MMst CO2 eq.** (51.83 MMst CO2 from Motor Gasoline; 15.81 MMst CO2 from Diesel)
Policies Included								
Current gas tax ($0.105/gallon of motor gasoline and $0.135/gallon of Diesel)	at the pump	all sectors		New Jersey is third lowest in the country for state gasoline tax level.				
Light Duty Vehicle CAFÉ standards	manufacturers/consumers	all sectors	From 22.5 MPG in 2007 to standards based on vehicle "footprint" in 2011	According to U.S. DOT "Final Environmental Assessment: National Highway Traffic Safety Administration Corporate Average Fuel Economy (CAFÉ) Standards" from 3/29/06 the standards are "Production weighted" but ***not*** sales-weighted and larger footprint vehicles have lower targets.	(2003$ dollars) A total of $12.72M cost and $17.98M savings for MY2008; A total of $39.65M cost and $46.35M savings for MY2009; A total of $43.77M cost and $53.73M savings for MY2010; A total of $58.21M cost and $68.82M savings for MY2011. (Source: NJ DEP, NHTSA)	**43.7 million Barrels consumed by light trucks (source: NJ DEP)]**	**46.0 million Barrels consumed by light trucks (source: NJDEP) [SAVINGS of 3.55 million Barrels over otherwise projected growth]**	**1.46 MMst CO2 eq. SAVED** (3.55 million Barrels @ 822.944 Lbs. CO2/barrel of MOTOR GASOLINE)
Maintain transportation system in a "state of good repair"		all sectors	incremental (e.g. indexed to CPI)	Specific costs and timing for this policy will be determined qualitatively and not explicitly included in the model.			**SAVINGS of 1.7 million Barrels (Source: VTC analysis, NJ Transit)**	**0.72 MMst CO2 eq. SAVED** (1.7 million barrels @ 79% 822.944 Lbs. CO2/barrel of MOTOR GASOLINE and 21% 940.109 Lbs. CO2/barrel of Diesel Fuel)
10% Ethanol	at the pump	all sectors	exists today as replacement for MTBE	Looking at the life-cycle calculations of petroleum consumed to create, transport, and the reduced fuel-efficiency by vehicles operating with ethanol-blended fuels may not reduce petroleum consumption or greenhouse gas emissions from the transportation sector.			**DEMAND for Ethanol 12.60 million Barrels** [= 10% motor gasoline demand in 2020] (Source: NJDEP, Ferrell, et al. "Science" no. 311, 2006)	**TOTAL IMPACT 4.89 MMst CO2 eq.** (0.50% Savings in GHG over the equivlent amount of petroleum) (source: NJ DEP)

TRANSPORTATION - Alternative Scenario *Preliminary*									
Policies Included	**Collection Point**	**Sector Allocation**	**Timing**	**Comments/Caveats**	**Potential Savings* (Annual in year 2020)**	**COST**	**Starting Point (2004)**	**2020 Goal w/Alternative Scenario**	**2020 GHG Impact with Alternative Scenario**
Demand Reduction Goal (-20%)					**32 Million Barrels**		**127.8 millions Barrels** [100.8 million Barrels motor gasoline and 26.3 million Barrels Diesel fuel] (Source: BPU Goals and Objectives Draft Document)	**127.7 million Barrels** [100.7 million Barrels motor gasoline and 26.9 million Barrels Diesel fuel] (20% reduction off 2020 projection)	**TOTAL IMPACT with 20% reduction 54.11 MMst CO2 eq.** (41.51 MMst CO2 from Motor Gasoline; 12.60 MMst CO2 from Diesel)
Vehicle Efficiency Strategies					***≈ 20 Million Barrels***				
Low Emission Vehicle (LEV) Rules	producers/consumers	Transportation	2009 = 0.038 NMOG for passenger cars and light-duty vehicles & 0.047 NMOG for the rest of fleet; 2010 = 0.035 for passenger cars and light-duty vehicles & 0.043 NMOG for the rest of fleet	Manufacturers can produce any combination of the 4 categories of vehicles (LEV, SULEV, ULEV or ZEV), as long as the delivered for **sale-weighted average emissions for the fleet of vehicles** meets a declining emissions average requirement, known as the **non-methane organic gas (NMOG) fleet average requirement**. [Note: VTC does not include LEV rules as part of their analysis, but rather suggest ***stronger federal*** CAFE standards]	**23.70 million Barrels** (Source: VTC analysis, NJDEP/NJDOT)	**ADDITIONAL cost** on the purchase of a new vehicle starting 2009: **Car = $1,064; Light-Duty Truck (SUV) = $1,069** (The program should be fully phased in by 2012); **Cost SAVINGS** due to lower O&M costs: **Car = $155/yr; Light-Duty Truck (SUV) = $176/yr** (Assumes average cost of gasoline of $2.20) [Source: NESCAUM, "Northeast State GHG Emission Reduction Potential from Adoption of the CA Motor Vehicle GHG Standards: Summary of NESCAUM Analysis", October 2005]			**TOTAL AVOIDED EMISSIONS 5.80 MMst GHG** (Source: NESCAUM, "Northeast State GHG Emission Reduction Potential from Adoption of the CA Motor Vehicle GHG Standards: Summary of NESCAUM Analysis", October 2005)
Alternative Fuel Strategies					***≈ 10 million Barrels***				
10% Ethanol (switching from corn-based to cellulosic ethanol)	consumers (at the pump)	Transportation	Phased in to achieve total substitution by 2020		**9.57 million Barrels** [= 9.5% of motor gasoline otherwise consumed in 2020 under the Alternative Scenario] (Source: NJDEP, Ferrell, et al. "Science" no. 311, 2006)	**[Includes $0.51/gallon blenders federal tax credit, but NO State subsidy. The capital cost for a typical 50,000 gallons/year plant would be $1.35/gallon]** 2007 prices, $0 feedstock cost (feedstock possibly from waste paper in MSW) = $1.65/gasoline gallon equivalent (GGE); 2007 prices, $47/ton feedstock (farm grown biomass, crop residue) = $2.80/GGE; 2010 prices, $0 feedstock cost = $1.60/GGE; 2015 prices, $0 feedstock cost = $1.20/GGE (source: Cook College)			**TOTAL AVOIDED EMISSIONS 4.63 MMst CO2 eq.** (6% Savings in GHG over the equivlent amount of petroleum) (source: NJ DEP)

Biodiesel/Biofuels	consumers (at the pump)	Transportation	2015 = 2.0% 2020 = 5.0%	The production is from NJ only	**NJ DEP - 0.391 million Barrels** *[this is JUST a Diesel off set]*	**NJ DEP -** For soy based biodiesel = $1.00/gallon subsidy; yellow grease based biodisel = $0.50/gallon subsidy; animal fat based biodiesel = $1.00/gallon subsidy (source: NJ DEP, various sources including NYSERDA)			**TOTAL AVOIDED EMISSIONS (POSSIBLE) 0.184 MMst CO2 eq.** (Diesel off set) (source: NJ DEP) [assumes 50% Savings in GHG over the equivlent amount of petroleum (source: NJ DEP)]
Transportation Demand Management (TDM) and Smart Growth					***≈ 5 million Barrels***				
Maintain transportation system in a "state of good repair"		all sectors		Specific costs and timing for this policy will be determined qualitatively and will not explicitly be included in the model.	**1.7 million Barrels (Source: VTC analysis, NJ Transit)**	**Specific costs and timing for the TDM and Smart Growth Strategies will be determined qualitatively and not explicitly included in the model.**			**0.72 MMst CO2 eq. SAVED** (1.7 million barrels @ 79% 822.944 Lbs. CO2/barrel of MOTOR GASOLINE and 21% 940.109 Lbs. CO2/barrel of Diesel Fuel)
TDM and Smart Growth policies above maintaining transportation system in a "state of good repair" including: Building Trans-Hudson Tunnel; Supporting/Promoting Transit Hubs and Transit Villages; Strengthening Commuter Option Programs; and Investing in Intelligent Transportation Systems*		Transportation		Specific costs and timing for this policy will be determined qualitatively and will not explicitly be included in the model.	*approximately* **3.6 million Barrels (Source: VTC analysis, NJ Transit)**				**TOTAL SAVED 2.23 MMst CO2 eq. SAVED** (2.0 million barrels @ 79% 822.944 Lbs. CO2/barrel of MOTOR GASOLINE and 21% 940.109 Lbs. CO2/barrel of Diesel Fuel)
Total Potential Savings Annually in 2020:					***≈ 35 million Barrels***				

**For more information on all the TDM and Smart Growth policy options, see VTC Assumptions developed for NJ DOT*