

*State of Rhode Island and Providence Plantations
Department of Administration – Office of Energy Resources*

Rhode Island State Energy Plan – Advisory Council Meeting #2

Thursday, December 20, 2012, 10:30 a.m. – 12:30 p.m.
Department of Administration, Conference Room A

AGENDA:

10:30 Welcome – *Marion Gold, RIOER*

10:45 RISEP Goals – *Danny Musher, RIOER*

11:15 Questions & Discussion

11:45 Introduction to “Baseline” Scope of Work – *Danny Musher, RIOER*

12:00 Next Steps & Meeting Dates – *Danny Musher, RIOER*

12:15 Public Comment

12:30 Adjourn

Rhode Island State Energy Plan

Advisory Council Meeting #2

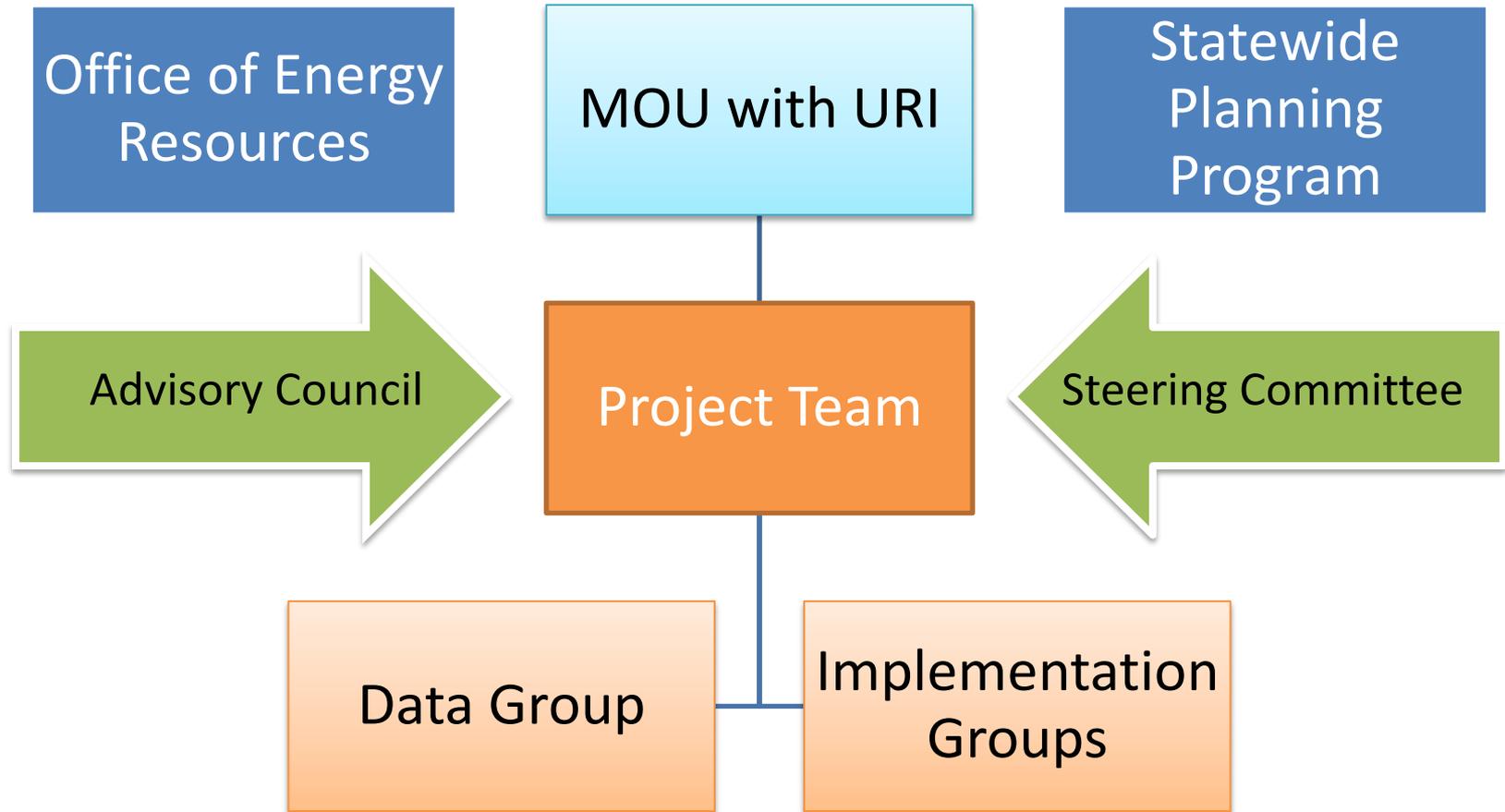
December 20, 2012

The Rhode Island State Energy Plan

VISION STATEMENT

*“In **2035**, we will provide energy services across all sectors—residential, commercial & industrial, municipal, power generation, and transportation—using safe, reliable, affordable, environmentally sound, sustainable, and where appropriate, in-State resources”*

Advisory Structure



Advisory Structure

Advisory Council

- Meets on a monthly basis
- Evaluates and provides feedback on research to assist staff in preparing a Preliminary Draft Plan
- Recommends Preliminary Draft Plan to the State Planning Council's Technical Committee for forwarding to the State Planning Council for public hearing, revision, and adoption

Timeline

Project Phases

Phase I: Research & Data Collection (December 2012 – May 2013)

Gather and synthesize the best available energy data; Set measurable goals based on expert and stakeholder feedback; Design an actionable implementation strategy

Phase II: Preparation of Preliminary Draft Plan (June 2013 – September 2013)

Distill research developed during Phase I into a Preliminary Draft Plan

Phase III: Technical & Public Review (October 2013 – March 2014)

Vet Preliminary Draft Plan through a technical and public review process; Adopt Plan as State Guide Plan Element

Advisory Structure

Advisory Council

- Proposed Topic Schedule:

Date	DATA GROUP		IMPLEMENTATION GROUP	
	New	Review	New	Review
October 31, 2012	Scope	<i>N/A</i>	Scope	<i>N/A</i>
December 2012	Baseline	Scope	Goals	Scope
January 2013	Forecast	Baseline	<i>N/A</i>	Goals
February 2013	Resources	Forecast	Transportation	<i>N/A</i>
March 2013	Justification	Resources	Thermal	Transportation
April 2013	<i>TBD</i>	<i>TBD</i>	Electricity	Thermal
May 2013	<i>TBD</i>	Justification	<i>TBD</i>	Electricity
June 2013	<i>TBD</i>	<i>TBD</i>	<i>TBD</i>	<i>TBD</i>

Today

December Meeting

Agenda:

- Introduction to detailed scope of work for Baseline
- Review of Advisory Council comments on Data & Implementation Scopes
- Review of Advisory Council suggestions for Goals

Date	DATA GROUP		IMPLEMENTATION GROUP	
	New	Review	New	Review
December 2012	Baseline	Scope	Goals	Scope

Setting Goals - *Methodology*

The Rhode Island State Energy Plan

VISION STATEMENT

*“In **2035**, we will provide energy services across all sectors—residential, commercial & industrial, municipal, power generation, and transportation—using safe, reliable, affordable, environmentally sound, sustainable, and where appropriate, in-State resources”*

Our criteria for delivering energy services

- Safety
- Reliability
- Affordability
- Environmental Protection
- Sustainability
- Geography

VISION STATEMENT

*“In **2035**, we will provide energy services across all sectors— residential, commercial & industrial, municipal, power generation, and transportation— using safe, reliable, affordable, environmentally sound, sustainable, and where appropriate, in-State resources”*

→ We want to deliver energy services in a manner consistent with these criteria

However

- It is unlikely that we can maximize every criteria simultaneously – i.e. there will be tradeoffs, or choices



→ Therefore, how can we best make informed decisions regarding goal-setting? By understanding the nature and degree of the tradeoffs, or choices, we face.

Proposed Approach

STEP 1 – ESTABLISH DIRECTIONAL OBJECTIVES

Refine criteria from RISEP vision statement into a set of directional objectives (RISEP Project Team and Advisory Council).

STEP 2 – DEFINE SCENARIOS

Propose and characterize rational, justifiable scenarios comprised of a set of strategies for each sector of Rhode Island's energy economy considered by this Plan: electricity, thermal energy (including natural gas), and transportation (Consultant Team TBD).

Proposed Approach

STEP 3 – SCENARIO MODELING

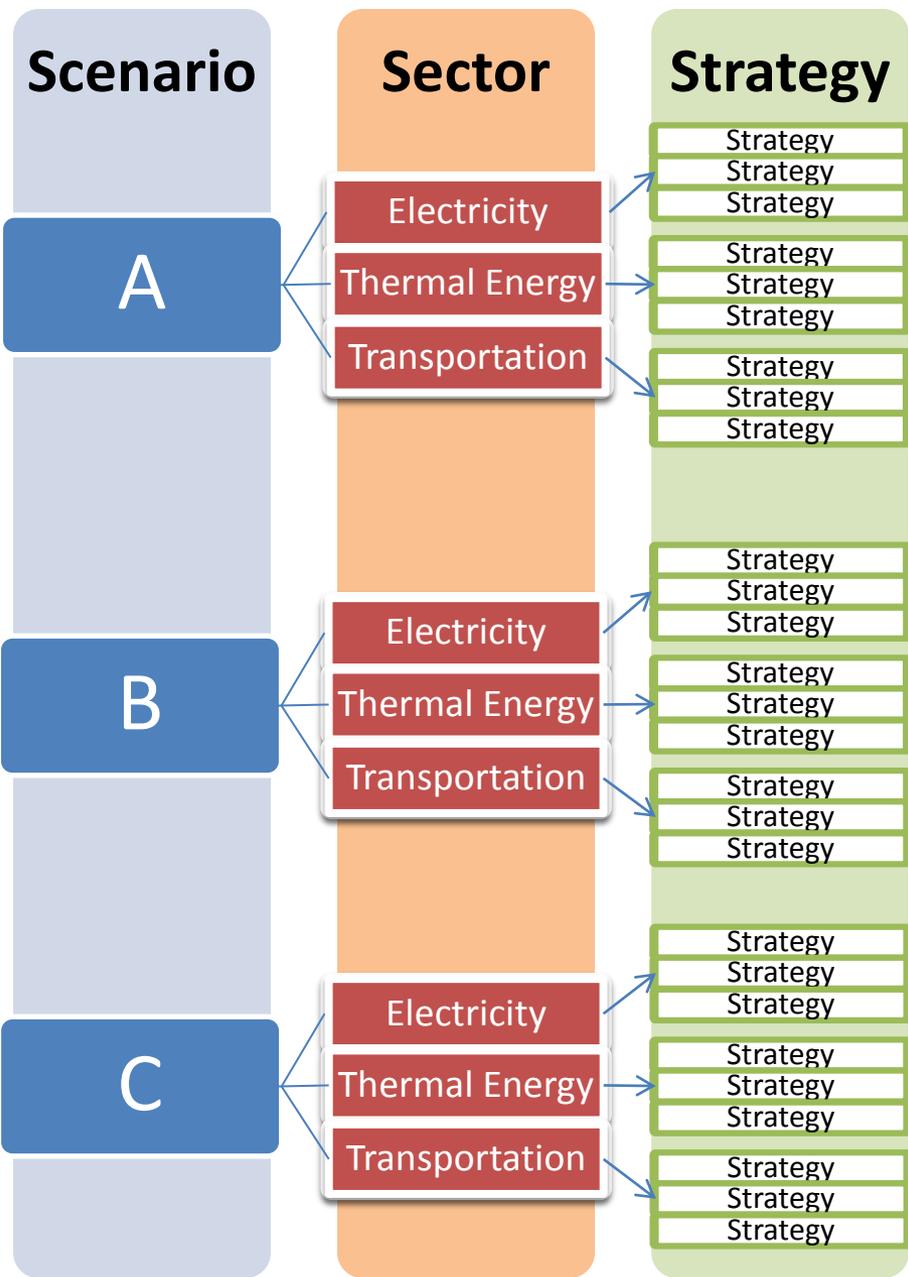
Recommend and execute a modeling analysis quantifying the degree to which each set of strategies meets the directional objectives of the Plan (Consultant Team TBD).

STEP 4 – SET GOALS

Based on the results of the scenario analyses, the RISEP Project Team and Advisory Council will further define Plan goals, policy recommendations and strategies (RISEP Project Team and Advisory Council).

Modeling Analytical Framework

Directional Objectives (Criteria)



	1	2	3	4	5
Scenario A	+	-	+	++	--
Sector A - Electricity	++	++	-	-	-
Sector A - Thermal Energy	+	--	--	++	+
Sector A - Transportation	-	++	-	+	+
Scenario B	++	--	--	++	-
Sector B - Electricity	+	--	-	+	+
Sector B - Thermal Energy	+	+	++	-	-
Sector B - Transportation	-	+	++	--	-
Scenario C	++	++	-	-	+
Sector C - Electricity					
Sector C - Thermal Energy					
Sector C - Transportation					

Directional Objectives

- The Project Team took the Advisory Council's responses for goals and identified cross-cutting themes and recurring strategies consistent with Plan criteria for providing energy services

Advisory Council Responses

Electricity

- Energy efficiency savings (overall & peak)
- Renewable energy (regional & local)
- Fuel diversity
- Cost containment
- Energy assurance
- Natural gas
- Smart grid
- Demand response
- Carbon (reductions, RGGI, etc.)

Advisory Council Responses

Thermal Energy

- Demand opportunities (gas & delivered fuels)
- Buildings (weatherization & net zero buildings)
- Natural gas
- Electricity
- Renewables

Advisory Council Responses

Transportation

- Demand (more high mileage cars)
- Clean Fuels Standard
- Electric Cars
- CNG & Biofuels
- Multimodal transportation system (e.g. public transit, commuter rail, etc.)

Draft Directional Objectives

Draft Directional Objectives

- Increase **energy security** through redundancy and supply assurance strategies
- Increase **system reliability**
- Increase the **diversity of fuels** used to provide energy services in different sectors
- Increase **consumer choice and access to information** to make informed energy decisions

Draft Directional Objectives

- Lower energy costs in order to: a) **increase the regional and global competitiveness** of Rhode Island business and industry; and b) **decrease economic impacts of energy costs** on consumers
- Increase the amount of **energy expenditure** that stays in-State
- Increase **employment**
- Increase **Gross State Product**

Draft Directional Objectives

- Invest in any **demand resources that are cheaper than supply**
- Lower **greenhouse gas emissions**
- Decrease the amount of **harmful environmental consequences** occurring over the lifecycle of any provision of energy services
- Increase the probability that the energy system could function in the **same manner in any day in any future year as it does today**

Introduction to Scope of Work

TASK 1: BASELINE

Rhode Island State Energy Plan Objectives

- **Gather Data**: *Analyze and quantify the amount, cost, supply, and environmental effects of all forms of energy resources—currently used, and potentially available to use—within all sectors in Rhode Island.*
- **Set Goals**: *Identify measurable targets for providing energy services using a resource mix that meets a set of criteria advancing the health, environmental, economic, and human wellbeing of the people, communities, and environment of Rhode Island.*
- **Recommend Action**: *Design a comprehensive implementation strategy to meet the goals of the Plan through public, private, and individual efforts, consistent with existing policy requirements at the local, state, regional, and federal level.*

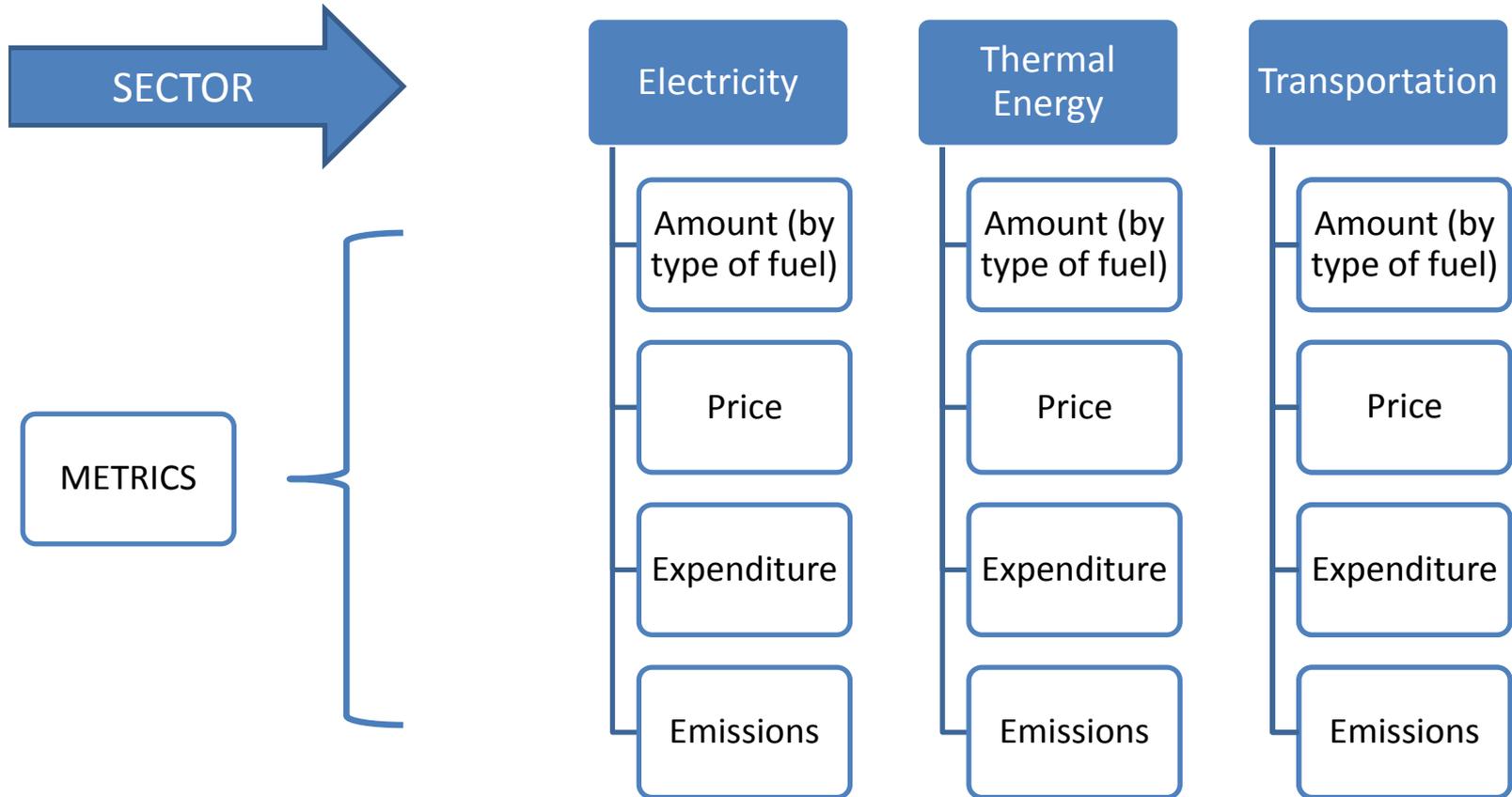
Step 1 - *Gather Data*

“What do we face?”

- **Gather Data**: *Analyze and quantify the amount, cost, supply, and environmental effects of all forms of energy resources—currently used, and potentially available to use—within all sectors in Rhode Island.*

Step 1 - *Gather Data*

TASK 1: BASELINE



TASK 1 - *Baseline*

Electricity

Dataset	Source
Electric Generation	EIA
Electric Capacity	EIA
Net Metering	National Grid
Distributed Generation	National Grid, FERC (Hydropower)
Whole SaleMarket	ISO-NE
Electricity Retail	EIA
Electric Monitored Emissions	Clean Air Market, EPA
RGGI Summary	RGGI, Inc.
Electricity Efficiency	Program Administrator Annual Reports

TASK 1 - *Baseline*

Multiple Sectors

Dataset	Source
Natural Gas	EIA
#2 Distillate Fuel	EIA
Residual Fuel	EIA

TASK 1 - *Baseline*

Thermal Energy

Dataset	Source
Kerosene	EIA
Propane	EIA
Heating Fuel Mix	Census
Natural Gas Efficiency	Program Administrator Annual Reports

TASK 1 - *Baseline*

Transportation

Dataset	Source
Motor Gasoline	EIA
Diesel Fuel	EIA
Jet Fuel	EIA
Transportation Alternatives	Amtrak, RIPTA, MBTA, Zipcar, Hertz
Vehicle Miles Traveled (VMT)	RIDOT, Federal Highway Administration
Registered Vehicles	Department of Motor Vehicles
Gas Tax Revenues	RIDOT

Next Steps

Next Steps

January Meeting

Questions for the Advisory Council to answer before the meeting:

- *What changes or additions would you like to see to the proposed directional objectives?*
- *What changes or additions would you like to see to the proposed Task 1: Baseline scope of work?*

→ Emailed responses requested from Advisory Council by Friday, January 18

Next Meeting

January Meeting

Proposed Agenda:

- Presentation of updated directional objectives
- Presentation of preliminary results from Task 1: Baseline
- Introduction to detailed scope of work for Task 2: Forecast

Date	DATA GROUP		IMPLEMENTATION GROUP	
	New	Review	New	Review
January 2013	Forecast	Baseline	<i>N/A</i>	Goals

Dates

Next Advisory Council Meeting Dates

- January 24, 10:30am to 12:30pm
- February 19, 10:30am to 12:30pm

Rhode Island State Energy Plan

Advisory Council Meeting #2

December 20, 2012

ADVISORY COUNCIL MEETING

STATE ENERGY PLAN

Thursday December 20, 2012
10:30 AM-12:30 PM
Conference Room A
RI Department of Administration
One Capitol Hill
Providence, RI

ATTENDANCE:

Advisory Council Members: Bob Chew, Abigail Anthony, Julie Gill, Jerry Elmer, Linda George, Bill Ferguson, Melissa Long, Jon Hagopian, Ian Springsteel, Nick Ucci, Bob Tormey, John Gilbrook

Steering Committee & Project Team Members: Marion Gold, Paul Gonsalves, Nancy Hess, Chris Kearns, Hannah Morini, Rachel Sholly, Allison Rogers, Danny Musher, Wendy Lucht

Other Attendees & Members of the Public: Rachel Henschel, Karina Lutz, Bob Chatham, Shawn Allen, Bruce DiGennaro, Mike Guerard, Sam Huntington, Charles Hawkins, Tim Faulker, Mike Henry

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MINUTES:

Marion G. began the meeting by having Advisory Council (AC) members introduce themselves and the organization they are associated with. The role of the AC is to meet on a monthly basis to provide feedback in developing an update to the State Energy Plan (SEP) that will be incorporated into the State Guide Plan (SGP). The SGP helps direct municipalities in developing their comprehensive plans. She thanked the AC members for their thoughtful feedback provided after the previous Advisory Council meeting. She then briefly reiterated the Plan Vision Statement, which is to provide energy services across all sectors. She then introduced State Energy Plan (SEP) Project Manager Danny Musher who has been synthesizing the feedback he has received from the AC.

Rhode Island State Energy Plan Goals

Danny M. began by thanking John Gilbrook & Ian Springsteel of National Grid, and Melissa Long of the Rhode Island Department of Transportation (RIDOT) for joining the AC. He brought the AC's attention to two spread sheet document handouts. One spread sheet documents all of the comments received from the AC on the scope of work (SOW) since the last meeting and the other is a draft data list for the historical baseline of Rhode Island energy consumption and costs across sectors. An additional handout outlined draft directional objectives (DOs) that will be revised after AC feedback. He then explained how the SEP will be incorporated into the SGP by the spring of 2014.

The AC's task is to develop concrete goals for the Plan. The vision statement will guide the goals. It says that in 2035, we will provide energy services across all sectors using safe, reliable, affordable, environmentally sound, sustainable and where appropriate, state resources. These principles form the criteria for the plan. The goal of the day's meeting was to prioritize the DOs.

The proposed approach consists of four steps. The first step is to utilize the criteria and establish DOs that the AC agrees upon. The second is to define scenarios. An RFP is being issued to hire a consultant team (C-Team) to look at possible scenarios and propose a set of strategies. In the third step, the C-Team will perform a modeling analysis to look at the different scenarios to see if they meet the DOs. Step four will set concrete, quantifiable goals.

The Project Team has taken the feedback from the AC and used the criteria to draft a set of DOs. Danny M. went over the DOs in the handout and then opened the meeting for discussion. Bob T. asked if the handouts will be provided in electric form. Danny M. said they will be e-mailed to AC members. Jerry E. asked if Danny M. was soliciting feedback on these DOs. Yes, and he wants to open the floor for discussion. He would also like written comments from the AC on these DOs.

Jerry E. feels that some of the DOs are so vague you can't form an opinion on them. He cited increased fuel diversity as an example. Do we really want to increase diversity by adding coal to the mix? Another example is lower greenhouse gas (GHG) emissions.

What percent are you going to decrease it? This is very vague, it does not tell us anything meaningful. Abigail A. responded that under the proposed approach, the selected C-Team would develop scenarios that will provide the different optimization levels needed to reach various goals. When you do an optimization study you will see that you can not reduce GHG by adding coal. Danny M. said that we need to tell the C-Team which way we want to go so they will develop scenarios that will get to goals. The goal of developing DO's is to agree on the full range of priorities, and then the C-Team will help show what tradeoffs Rhode Island faces in balancing the different priorities. Abigail A. added that another aspect is that it will allow the AC to see the interaction among sectors rather than looking at them in silos.

Bill F. said that he feels the transportation sector is the key to reducing GHG. He does not feel enough attention has been paid to this sector. He wants to understand what role this sector plays in GHG reduction. There are a lot of electric EE programs, like the Energy Efficiency Program Plan (EPPP), so that is covered. We also have a lot going on in the renewable energy (RE) sector. But there is not a lot going on in transportation. He is glad to see RIDOT, NGrid's John Gilbrook and Wendy Lucht of the Clean Cities Coalition in the room. He feels this is a good core transportation group. Danny M. said that the transportation data will be studied using different scenarios.

Jerry E. asked if RIPTA has been invited to join the AC. Danny M. said that they will be invited to participate in the transportation implementation group. Each sector will have smaller implementation groups to discuss specific strategies for each sector. John G. feels the answers will come after the C-Team analyzes the data. Jon H. feels it is important to look at the intermodal nature of transportation. We need to look at transportation links and see if there is a way we can get efficiencies and reliability from this sector. This will also cross over to GHG initiatives. We can't ignore what people use every day. Wendy L. said that the AC needs quantifiable data on transportation like Amtrak, RIPTA & MBTA ridership figures. She also feels ethanol and bio-diesel should be on the list of fuels for the baseline data.

Bob Chatham feels it would be helpful to have a list of metrics to drive goals. Danny M. said that is what he wants the C-Team to recommend. Bob Chatham feels that the AC should drive this and not the C-Team. Ian S. asked what environmental problems the AC is trying to solve by setting these goals. He also wanted to comment on the scope of the DOs. He asked if diversity of fuels is a statement that we can agree with. Right now, with the increase of natural gas, we have less diversity but are getting a lot of environmental benefits out of it. He questions this as a principle. Perhaps the question is what are you trying to accomplish by diversity—is it cost? Volatility? Security? You may not be able to get all three. He does not think diversity is a goal unto itself. Security can also be a problem if we only rely on natural gas because of possible supply constraints.

Bob Chew said that consumer education was important. The public needs to be more aware of energy. He also wonders how we will get to our RE goals if the grid can not handle it. What are the challenges involved in getting more RE? Bob T. asked if these goals are the complete list. Would it work better if you had diversity of fuels as a topic

and then find the metrics to determine whether an increase or decrease is the right way to proceed? John G. wonders if some of these DOs can be rolled up into other goals. He asked if there is a third screen that needs to be put up that includes overarching goals that need to be met and the strategies needed to get there. What is the end game? Danny M said that the end game will happen when everyone has energy services. That is the final goal. Bob T. feels that what is missing is time because our short term goals may result in an increase in cost to get to the long term goals.

Ian S. questioned the goal of increasing the amount of energy expenditures that stay in-state. He knows this is a politically correct concept but does the state have the goal of producing cars in state? Do we want to produce more computer chips? Probably not, because it is not to our competitive advantage. What is the State's biggest bang for the buck? Abigail A. feels this is another joint trade-off where you hope to get some balance between keeping energy expenditure in the state and increased EE and energy generation.

Another conflict that Ian S. mentioned is the Combined Heat and Power (CHP) initiative that is included in the EEPP. This will increase GHG emission because it will shift generation from out of state to in state. He feels reaching CHP potential will increase GHG. It may also add cost to the system because it could be cheaper to run a gas plant in another New England state.

John G. said that for the purpose of this meeting, the focus on the draft DO's should be identifying if anything is missing. Marion G. wondered if human health needed to be added. When New York did their plan health was a component. Danny M. said that the Project Team will take the AC comments and rework the DOs and have metrics associated with them. He would like to spend the next few minutes trying to determine if anything is missing that should be incorporated into the DOs. Karina L. brought up climate change as an end game goal. Danny M. said that although climate change will be part of the plan, it is not a climate change plan. Wendy L. said that a plan for one million people is not going to really prevent and substantially diminish GHG emissions. We can just do the best we can to consume less GHG.

John G. wanted to know what the next steps were. Danny M. said before the next meeting, the Project Team will put together a straw man of DOs that will have sub-categories and metrics associated with them. In the meantime AC input would be appreciated. Julie G. strongly recommended using the six criteria in the Vision Statement to guide DOs. Put the DOs under each of these goals. She feels the criteria listed and the priorities on the list are excellent. An outline could be drafted based on those criteria. Bob T. said that was the point he was getting at earlier. He is having a problem with the directional part of the objectives. He does not have enough metrics to know if he is in favor of these DOs. John G. agreed.

Bob Chew asked if we need geography as one of the bullets. Jon H. said that geography does play into it if you are going to be buying RE from Maine. Bob Chew said he would rather have economic benefits to the RI as the bullet rather than geography. We need to look at energy spending leaving the state. He also said that health & safety issues are

important if you are talking about nuclear or coal. Shawn A. asked if there should be a scenario for energy resiliency during storms. Danny M. said the end game was to use these DOs and identify what the metrics are.

Bill F. wanted to reemphasize that the meeting discussion has been almost completely about electricity generation. He is afraid the AC will forget about transportation. He also agreed with Bob T. that the plan should have a time element. There should be short term, near term and long term goals and these goals can be defined as we go along. Danny M. said the planning horizon was a ten year time frame with goals going out to 2035. Bob T. said that you may get different answers for different timeframes.

Bob Chew said that in addition to transportation, the AC should look at the shelter industry. He cited a recent NGrid presentation to the Energy Efficiency and Resource Management Council that found that commercial & residential buildings in RI do not meet basic code requirements. This is a major problem in the shelter industry and it needs to be addressed. It is bad when new housing does not meet minimum energy code. Jon H. said the recently approved EEPP has a whole section on code compliance. Ian S. said that there will be technical assistance in the EEPP for local code enforcement. Bob Chew said there were blatant holes in the local codes.

Introduction to the “Baseline” Scope of Work

Danny M. then wanted to move on to the SOW. He asked the AC to look at the horizontal table that they received which displays the type of data that is being collected for the historical baseline. Currently, the AC is in the data gathering phase, which will be used to inform goals. The metrics used for each three sectors are: the amount of fuel consumed, the price of that fuel, and the GHG emissions associated with it. We will be getting electric generation data and capacity data.

Jerry E. asked about electric generation in RI. Is that electricity that is generated geographically in RI, or the generation of electricity that is consumed in RI? Danny M. said they had regional data of the fuels that are firing generation plants in the region and in Rhode Island, as well as wholesale & retail data from ISO-NE and the Energy Information Administration. Bob T. asked if a lot of this data was at the PUC from filings and annual reports. Ian S. said that about half of the electric data is proved by competitive suppliers so the PUC doesn't have all the data. You would only be capturing half of the retail cost. You would need to look at the data from the competitive suppliers to understand the broad picture.

Bob Chew would like to see another line item under retail electric prices that shows the average cost of electricity over the next 35 years; because it is hard to compare the cost of RE & fossil fuel generation using today's data. Danny M. said it would be addressed at the next AC meeting. Ian S. suggested adding NEPOOL-GIS data. GIS data tracks what generation sources are contractually used for both NGrid & competitive suppliers. This is the consumption mix based on ISO-NE dispatch. Jerry E. mentioned an EE Working

Group, which the ISO has commissioned and he sits on, which is accumulating data in RI & other New England States. This is very accurate data.

Danny M. said the data list will change after today's discussion. He asked the AC to look at the data sheet and see if there is other data that needs to be collected. At the next AC meeting there will be a presentation by Environment Northeast on the forecasting for the SEP. They will present their proposed SOW and the scenarios they will use to create this forecast. The DOs will also be revised and some historical baseline data will be available. The dates of the next two meetings are set for Thursday January 24th and Tuesday February 19th.