Planning Advisory Committee Doubletree Hotel, Westborough, MA November 20, 2013

Mark Babula ISO New England Inc. Denis Bergeron Maine Public Utilities Commission Peter Bernard ISO New England Inc. Brad Bentley Northeast Utilities Service Company Curt Beveridge Central Maine Power Company Christian Bilcheck United Illuminating Company Cal Bowie Northeast Utilities Service Company Tim Brennan New England Power Company Frank Broche ICF Dorothy Capra NESCOE ML Chan ML Consulting Group Rick Conant RLC Engineering Dave Conroy Central Maine Power Company Ray Coxe Mosaic Energy for Brockfield Greg Cunningham Conservation Law Foundation Ben D'Antonio NESCOE Gaurang Desai Customized Energy Solutions Stacy Dimou Bangor Hydro Electric Company Gaurang Desai Customized Energy Solutions Stary Dimou Bangor Hydro Electric Company Jeff Fenn Bangor Hydro Electric Company Tory Fitzgerald Northeast Utilities Service Company Kevin Flynn ISO New England Inc. Bil Fowler Exelon/Equipower/Granite Ridge Steve Garwood New Hampshire Transmission Don Gates ISO New England Inc.	Joseph Adadjo	Northeast Utilities Service Company
Denis Bergeron Maine Public Utilities Commission Peter Bernard ISO New England Inc. Brad Bentley Northeast Utilities Service Company Curt Beveridge Central Maine Power Company Cal Bowie Northeast Utilities Service Company Cal Bowie Northeast Utilities Service Company Tim Brennan New England Power Company Frank Broche ICF Dorothy Capra NESCOE ML Chan ML Consulting Group Rick Conant RLC Engineering Dave Conroy Central Maine Power Company Ray Coxe Mosaic Energy for Brookfield Gerg Qunningham Conservation Law Foundation Ben D'Antonio NESCOE George DeLovraio New England Power Company Gaurang Desai Customized Energy Solutions Stacy Dimou Bangor Hydro Electric Company Star Doe ISO New England Inc. Frank Ettori Vermont Electric Company Jeff Fenn Bangor Hydro Electric Company Kevin Flynn ISO New England Inc. Bill Fowler Exelon/Equipower/		
Peter Bernard ISO New England Inc. Brad Bentley Northeast Utilities Service Company Curt Beveridge Central Maine Power Company Christian Bilcheck United Illuminating Company Call Bowie Northeast Utilities Service Company Tim Brennan New England Power Company Frank Broche ICF Dorothy Capra NESCOE ML Chan ML Consulting Group Rick Conant RLC Engineering Dave Conroy Central Maine Power Company Ray Coxe Mosaic Energy for Brookfield Greg Cunningham Conservation Law Foundation Ben D'Antonio NESCOE Gaurang Desai Customized Energy Solutions Stacy Dimou Bangor Hydro Electric Company Gaurang Desai Customized Energy Solutions Staro Doe ISO New England Inc. Frank Ettori Vermont Electric Company Jeff Fenn Bangor Hydro Electric Company Kevin Flynn ISO New England Inc. Bill Fowler Exelon/Equipower/Granite Ridge Steve Garwood New Hampshire Trans	Denis Bergeron	
Curt Beveridge Central Maine Power Company Christian Bilcheck United Illuminating Company Cal Bowie Northeast Utilities Service Company Tim Brennan New England Power Company Frank Broche ICF Dorothy Capra NESCOE ML Chan ML Consulting Group Rick Conant RLC Engineering Dave Conroy Central Maine Power Company Ray Coxe Mosaic Energy for Brookfield George DeLovraio New England Power Company Gaurang Desai Customized Energy Solutions Star Doe ISO New England Power Company Gaurang Desai Customized Energy Solutions Star Doe ISO New England Inc. Frank Ettori Vermont Electric Company Jeff Fenn Bangor Hydro Electric Company Kevin Flynn ISO New England Inc. Bill Fowler Exelon/Equipower/Grante Ridge Steve Garwood New England Inc. Mike Henry Envirommental Northeast John Higgins Navigant Consulting Jim Hyland MWEC		
Curt Beveridge Central Maine Power Company Christian Bilcheck United Illuminating Company Cal Bowie Northeast Utilities Service Company Tim Brennan New England Power Company Frank Broche ICF Dorothy Capra NESCOE ML Chan ML Consulting Group Rick Conant RLC Engineering Dave Conroy Central Maine Power Company Ray Coxe Mosaic Energy for Brookfield George DeLovraio New England Power Company Gaurang Desai Customized Energy Solutions Star Doe ISO New England Power Company Gaurang Desai Customized Energy Solutions Star Doe ISO New England Inc. Frank Ettori Vermont Electric Company Jeff Fenn Bangor Hydro Electric Company Kevin Flynn ISO New England Inc. Bill Fowler Exelon/Equipower/Grante Ridge Steve Garwood New England Inc. Mike Henry Envirommental Northeast John Higgins Navigant Consulting Jim Hyland MWEC	Brad Bentley	Northeast Utilities Service Company
Cal Bowle Northeast Utilities Service Company Tim Brennan New England Power Company Frank Broche ICF Dorothy Capra NESCOE ML Chan ML Consulting Group Rick Conant RLC Engineering Dave Conroy Central Maine Power Company Ray Coxe Mosaic Energy for Brookfield Gerg Cunningham Conservation Law Foundation Ben D'Antonio NESCOE George DeLovraio New England Power Company Gaurang Desai Customized Energy Solutions Stacy Dimou Bangor Hydro Electric Company Staro Doe ISO New England Inc. Frank Ettori Vermont Electric Company Jeff Fenn Bangor Hydro Electric Company Jeff Vermont ISO New England Inc. Fraink Ettori Vermont Electric Company Kevin Flynn ISO New England Inc. Bill Fowler Exelon/Equipower/Granite Ridge Steve Garwood New Hangshine Transmission Don Gates ISO New England Inc. Mike Henry Environmental Northeast		
Cal Bowie Northeast Utilities Service Company Tim Brennan New England Power Company Frank Broche ICF Dorothy Capra NESCOE ML Chan ML Consulting Group Rick Conant RLC Engineering Dave Conroy Central Maine Power Company Ray Coxe Mosaic Energy for Brookfield Gerge Cunningham Conservation Law Foundation Ben D'Antonio NESCOE George DeLovraio New England Power Company Gaurang Desai Customized Energy Solutions Stacy Dimou Bangor Hydro Electric Company Staro Dimou Bangor Hydro Electric Company Staro Dimou Bangor Hydro Electric Company Jeff Fenn Bangor Hydro Electric Company Jeff Fenn Bangor Hydro Electric Company Kevin Flynn ISO New England Inc. Bill Fowler Exelon/Equipower/Granite Ridge Steve Garwood New Hangshire Transmission Don Gates ISO New England Inc. Mike Henry Environmental Northeast John Higgins Navigant Consulting </td <td>Christian Bilcheck</td> <td>United Illuminating Company</td>	Christian Bilcheck	United Illuminating Company
Frank BrocheICFDorothy CapraNESCOEML ChanML Consulting GroupRick ConantRLC EngineeringDave ConroyCentral Maine Power CompanyRay CoxeMosaic Energy for BrookfieldGreg CunninghamConservation Law FoundationBen D'AntonioNESCOEGeorge DeLovraioNew England Power CompanyGaurang DesaiCustomized Energy SolutionsStacy DimouBangor Hydro Electric CompanyStar DoeISO New England Inc.Frank EttoriVermont Electric CompanyJeff FennBangor Hydro Electric CompanyKevin FlynnISO New England Inc.Bill FowlerExelon/Equipower/Granite RidgeSteve GarwoodNew England Inc.Mike GiamoISO New England Inc.Mike HenryEnvironmental NortheastJohn HigginsNavigant ConsultingJim HylandMMWECJeff JonesBangor Hydro Electric CompanyRich KowalskiISO New England Inc.Marylo KrohewskiVermont Public Utilities CommissionDom GatesDon GatesJohn HigginsNavigant ConsultingJim HylandMMWECJeff JonesBangor Hydro Electric CompanyRich KowalskiISO New England Inc.Marylo KrohewskiVermont Public Utilities	Cal Bowie	Northeast Utilities Service Company
Dorothy CapraNESCOEML ChanML Consulting GroupRick ConantRLC EngineeringDave ConroyCentral Maine Power CompanyRay CoxeMosaic Energy for BrookfieldGreg CunninghamConservation Law FoundationBen D'AntonioNESCOEGeorge DeLovraioNew England Power CompanyGaurang DesaiCustomized Energy SolutionsStacy DimouBangor Hydro Electric CompanyStar DoeISO New England Inc.Frank EttoriVermont Electric CompanyJeff FennBangor Hydro Electric CompanyTony FitzgeraldNortheast Utilities Service CompanyKevin FlynnISO New England Inc.Bill FowlerExelon/Equipower/Granite RidgeSteve GarwoodNew Hampshire TransmissionDon GatesISO New England Inc.Mike GiamoISO New England Inc.Brian HaydukNew England Power CompanyMike HenryEnvironmental NortheastJohn HigginsNavigat ConsultingJim HylandMWWECJeff JonesBangor Hydro Electric CompanyTom KaslowGDF SuezBill KillgoarLong Island Power AuthorityRich KowalskiISO New England Inc.Marylo KrolewskiVermont Public Utilities CommissionMaylo KrolewskiVermont Public Utilities CommissionMarylo KrolewskiVermont Public Utilities CommissionMarylo KrolewskiUso New England Inc.Marylo KrolewskiUso New England Inc.Maruice MayPower Insights	Tim Brennan	New England Power Company
ML Chan ML Consulting Group Rick Conant RLC Engineering Dave Conroy Central Maine Power Company Ray Coxe Mosaic Energy for Brookfield Greg Cunningham Conservation Law Foundation Ben D'Antonio NESCOE George DeLovraio New England Power Company Gaurang Desai Customized Energy Solutions Stacy Dimou Bangor Hydro Electric Company Stan Doe ISO New England Inc. Frank Ettori Vermont Electric Company Jeff Fenn Bangor Hydro Electric Company Tony Fitzgerald Northeast Utilities Service Company Kevin Flynn ISO New England Inc. Bill Fowler Exelon/Equipower/Granite Ridge Steve Garwood New Hampshire Transmission Don Gates ISO New England Inc. Mike Giamo ISO New England Inc. Mike Giamo ISO New England Inc. Mike Giamo ISO New England Inc. John Higgins Navigant Consulting Jim Hyland MMWEC Jeff Jones Bangor Hydro Electric Company	Frank Broche	ICF
Rick ConantRLC EngineeringDave ConroyCentral Maine Power CompanyRay CoxeMosaic Energy for BrookfieldGreg CunninghamConservation Law FoundationBen D'AntonioNESCOEGeorge DeLovraioNew England Power CompanyGaurang DesaiCustomized Energy SolutionsStacy DimouBangor Hydro Electric CompanyStaro DoeISO New England Inc.Frank EttoriVermont Electric CompanyJeff FennBangor Hydro Electric CompanyTony FitzgeraldNortheast Utilities Service CompanyKevin FlynnISO New England Inc.Bill FowlerExelon/Equipower/Granite RidgeSteve GarwoodNew England Inc.Mike GiamoISO New England Inc.Bilar HaydukNew England Inc.Biran HaydukNew England Inc.Biran HaydukNew England Inc.Biran HaydukNew England Inc.John HigginsNavigant ConsultingJim HylandMWWECJeff JonesBangor Hydro Electric CompanyTom KaslowGDF SuezBill KildpoarLong Island Power AuthorityRich KowalskiISO New England Inc.Abigail KrichBoreas RenewablesMaryJo KrolewskiVermont Public Utilities CommissionRobi LafayetteISO New England Inc.Abigail KrichBoreas RenewablesMaryJo KrolewskiVermont Public Utilities CommissionRobi LafayetteISO New England Inc.Marcice MayPower InsightsAl McBrideISO New Eng	Dorothy Capra	NESCOE
Rick ConantRLC EngineeringDave ConroyCentral Maine Power CompanyRay CoxeMosaic Energy for BrookfieldGreg CunninghamConservation Law FoundationBen D'AntonioNESCOEGeorge DeLovraioNew England Power CompanyGaurang DesaiCustomized Energy SolutionsStacy DimouBangor Hydro Electric CompanyStaro DoeISO New England Inc.Frank EttoriVermont Electric CompanyJeff FennBangor Hydro Electric CompanyTony FitzgeraldNortheast Utilities Service CompanyKevin FlynnISO New England Inc.Bill FowlerExelon/Equipower/Granite RidgeSteve GarwoodNew England Inc.Mike GiamoISO New England Inc.Bilar HaydukNew England Inc.Biran HaydukNew England Inc.Biran HaydukNew England Inc.Biran HaydukNew England Inc.John HigginsNavigant ConsultingJim HylandMWWECJeff JonesBangor Hydro Electric CompanyTom KaslowGDF SuezBill KildpoarLong Island Power AuthorityRich KowalskiISO New England Inc.Abigail KrichBoreas RenewablesMaryJo KrolewskiVermont Public Utilities CommissionRobi LafayetteISO New England Inc.Abigail KrichBoreas RenewablesMaryJo KrolewskiVermont Public Utilities CommissionRobi LafayetteISO New England Inc.Marcice MayPower InsightsAl McBrideISO New Eng	ML Chan	ML Consulting Group
Dave ConroyCentral Maine Power CompanyRay CoxeMosaic Energy for BrochfieldGreg CunninghamConservation Law FoundationBen D'AntonioNESCOEGeorge DeLovraioNew England Power CompanyGaurang DesaiCustomized Energy SolutionsStacy DimouBangor Hydro Electric CompanyStan DoeISO New England Inc.Frank EttoriVermont Electric CompanyJeff FennBangor Hydro Electric CompanyTony FitzgeraldNortheast Utilities Service CompanyKevin FlynnISO New England Inc.Bill FowlerExelon/Equipower/Granite RidgeSteve GarwoodNew Hampshire TransmissionDon GatesISO New England Inc.Mike GiamoISO New England Inc.Mike GiamoISO New England Inc.Mike GiamoISO New England Inc.Mike HenryEnvironmental NortheastJohn HigginsNavigant ConsultingJim HylandMWWECJeff JonesBangor Hydro Electric CompanyTom KaslowGDF SuezBill KillgoarLong Island Power AuthorityRich KowalskiISO New England Inc.Abigail KrichBoreas RenewablesMarylo KrolewskiVermont Public Utilities CommissionRobin LafayetteISO New England Inc.Marcice MayPower InsightsAl McBrideISO New England Inc.Brent OberlinISO New England Inc.Marcice MayPower England Inc.Marcice MayPower England Inc.Marcice MayPower Engl	Rick Conant	
Greg CunninghamConservation Law FoundationBen D'AntonioNESCOEGeorge DeLovraioNew England Power CompanyGaurang DesaiCustomized Energy SolutionsStacy DimouBangor Hydro Electric CompanyStan DoeISO New England Inc.Frank EttoriVermont Electric CompanyJeff FennBangor Hydro Electric CompanyTony FitzgeraldNortheast Utilities Service CompanyKevin FlynnISO New England Inc.Bill FowlerExelon/Equipower/Granite RidgeSteve GarwoodNew Hampshire TransmissionDon GatesISO New England Inc.Mike GiamoISO New England Inc.Brian HaydukNew England Inc.Brian HaydukNew England Power CompanyMike HenryEnvironmental NortheastJohn HigginsNavigant ConsultingJim HylandMWWECJeff JonesBangor Hydro Electric CompanyTom KaslowGDF SuezBill KrichBoreas RenewablesMaryJo KrolewskiVermont Public Utilities CommissionAbigail KrichBoreas RenewablesMaryJo KrolewskiVermont Public Utilities CommissionRobin LafayetteISO New England Inc.Maurice MayPower InsightsAl McBrideISO New England Inc.Barylo KrolewskiUser Regland Inc.Marc LyonsISO New England Inc.Marcie MayPower InsightsAl McBrideISO New England Inc.Brent OberlinISO New England Inc.Brent OberlinISO New Engla	Dave Conroy	
Greg CunninghamConservation Law FoundationBen D'AntonioNESCOEGeorge DeLovraioNew England Power CompanyGaurang DesaiCustomized Energy SolutionsStacy DimouBangor Hydro Electric CompanyStan DoeISO New England Inc.Frank EttoriVermont Electric CompanyJeff FennBangor Hydro Electric CompanyTony FitzgeraldNortheast Utilities Service CompanyKevin FlynnISO New England Inc.Bill FowlerExelon/Equipower/Granite RidgeSteve GarwoodNew Hampshire TransmissionDon GatesISO New England Inc.Mike GiamoISO New England Inc.Brian HaydukNew England Inc.Brian HaydukNew England Power CompanyMike HenryEnvironmental NortheastJohn HigginsNavigant ConsultingJim HylandMWWECJeff JonesBangor Hydro Electric CompanyTom KaslowGDF SuezBill KrichBoreas RenewablesMaryJo KrolewskiVermont Public Utilities CommissionAbigail KrichBoreas RenewablesMaryJo KrolewskiVermont Public Utilities CommissionRobin LafayetteISO New England Inc.Maurice MayPower InsightsAl McBrideISO New England Inc.Barylo KrolewskiUser Regland Inc.Marc LyonsISO New England Inc.Marcie MayPower InsightsAl McBrideISO New England Inc.Brent OberlinISO New England Inc.Brent OberlinISO New Engla	Ray Coxe	Mosaic Energy for Brookfield
Ben D'AntonioNESCOEGeorge DeLovraioNew England Power CompanyGaurang DesaiCustomized Energy SolutionsStacy DimouBangor Hydro Electric CompanyStan DoeISO New England Inc.Frank EttoriVermont Electric CompanyJeff FennBangor Hydro Electric CompanyTony FitzgeraldNortheast Utilities Service CompanyKevin FlynnISO New England Inc.Bill FowlerExelon/Equipower/Granite RidgeSteve GarwoodNew Hampshire TransmissionDon GatesISO New England Inc.Brian HaydukNew England Inc.Mike GiamoISO New England Inc.Brian HaydukNew England Power CompanyMike HenryEnvironmental NortheastJohn HigginsNavigant ConsultingJim HylandMMWECJeff JonesBangor Hydro Electric CompanyTom KaslowGDF SuezBill KillgoarLong Island Power AuthorityRich KowalskiISO New England Inc.Abigail KrichBoreas RenewablesMaryJo KrolewskiVermont Public Utilities CommissionRobin LafayetteISO New England Inc.Maurice MayPower InsightsAl McBrideISO New England Inc.Maurice MayPower InsightsAl McBrideISO New England Inc.Burent OberlinISO New England Inc.Maurice MayPower InsightsAl McBrideISO New England Inc.Brent OberlinISO New England Inc.Brent OberlinISO New England Inc. <tr< td=""><td></td><td>Conservation Law Foundation</td></tr<>		Conservation Law Foundation
Gaurang DesaiCustomized Energy SolutionsStacy DimouBangor Hydro Electric CompanyStan DoeISO New England Inc.Frank EttoriVermont Electric CompanyJeff FennBangor Hydro Electric CompanyTony FitzgeraldNortheast Utilities Service CompanyKevin FlynnISO New England Inc.Bill FowlerExelon/Equipower/Granite RidgeSteve GarwoodNew Hampshire TransmissionDon GatesISO New England Inc.Mike GiamoISO New England Inc.Brian HaydukNew England Inc.Brian HaydukNew England Inc.John HigginsNavigant ConsultingJim HylandMMWECJeff JonesBangor Hydro Electric CompanyMike IlligoarLong Island Power AuthorityRich KowalskiISO New England Inc.Marylo KrolewskiISO New England Inc.Marylo KrolewskiVermont Public Utilities CommissionMarylo KrolewskiISO New England Inc.Maurice MayPower InsightsAl McBrideISO New England Inc.Bruce McKinnonCMEECJohn MoskalU.S. EPABrent OberlinISO New England Inc.Daniel PattAlstomRose Ann PelletierMassachusetts Department of Public Utilities		NESCOE
Gaurang DesaiCustomized Energy SolutionsStacy DimouBangor Hydro Electric CompanyStan DoeISO New England Inc.Frank EttoriVermont Electric CompanyJeff FennBangor Hydro Electric CompanyTony FitzgeraldNortheast Utilities Service CompanyKevin FlynnISO New England Inc.Bill FowlerExelon/Equipower/Granite RidgeSteve GarwoodNew Hampshire TransmissionDon GatesISO New England Inc.Brian HaydukNew England Inc.Brian HaydukNew England Inc.Brian HaydukNew England Inc.John HigginsNavigant ConsultingJim HylandMMWECJeff JonesBangor Hydro Electric CompanyTom KaslowGDF SuezBill KillgoarLong Island Power AuthorityRich KowalskiISO New England Inc.Marylo KrolewskiVermont Public Utilities CommissionMarylo KrolewskiVermont Public Utilities CommissionRobin LafayetteISO New England Inc.Maurice MayPower InsightsAl McBrideISO New England Inc.Marylo KrolewskiISO New England Inc.Marylo KrolewskiVermont Public Utilities CommissionRobin LafayetteISO New England Inc.Maurice MayPower InsightsAl McBrideISO New England Inc.Bruce McKinnonCMEECJohn MoskalU.S. EPABrent OberlinISO New England Inc.Daniel PattAlstomRose Ann PelletierMassachusetts Departmen	George DeLovraio	New England Power Company
Stan DoeISO New England Inc.Frank EttoriVermont Electric CompanyJeff FennBangor Hydro Electric CompanyTony FitzgeraldNortheast Utilities Service CompanyKevin FlynnISO New England Inc.Bill FowlerExelon/Equipower/Granite RidgeSteve GarwoodNew Hampshire TransmissionDon GatesISO New England Inc.Mike GiamoISO New England Inc.Brian HaydukNew England Power CompanyMike HenryEnvironmental NortheastJohn HigginsNavigant ConsultingJim HylandMMWECJeff JonesBangor Hydro Electric CompanyTom KaslowGDF SuezBill KillgoarLong Island Power AuthorityRich KowalskiISO New England Inc.Marylo KrolewskiVermont Public Utilities CommissionRobin LafayetteISO New England Inc.Marc LyonsISO New England Inc.Bruce McKinnonCMEECJohn MoskalU.S. EPABrent OberlinISO New England Inc.Daniel PattAlstomRose Ann PelletierMassachusetts Department of Public Utilities	Gaurang Desai	Customized Energy Solutions
Stan DoeISO New England Inc.Frank EttoriVermont Electric CompanyJeff FennBangor Hydro Electric CompanyTony FitzgeraldNortheast Utilities Service CompanyKevin FlynnISO New England Inc.Bill FowlerExelon/Equipower/Granite RidgeSteve GarwoodNew Hampshire TransmissionDon GatesISO New England Inc.Mike GiamoISO New England Inc.Brian HaydukNew England Power CompanyMike HenryEnvironmental NortheastJohn HigginsNavigant ConsultingJim HylandMMWECJeff JonesBangor Hydro Electric CompanyTom KaslowGDF SuezBill KillgoarLong Island Power AuthorityRich KowalskiISO New England Inc.Marylo KrolewskiVermont Public Utilities CommissionRobin LafayetteISO New England Inc.Marc LyonsISO New England Inc.Bruce McKinnonCMEECJohn MoskalU.S. EPABrent OberlinISO New England Inc.Daniel PattAlstomRose Ann PelletierMassachusetts Department of Public Utilities	Stacy Dimou	Bangor Hydro Electric Company
Jeff FennBangor Hydro Electric CompanyTony FitzgeraldNortheast Utilities Service CompanyKevin FlynnISO New England Inc.Bill FowlerExelon/Equipower/Granite RidgeSteve GarwoodNew Hampshire TransmissionDon GatesISO New England Inc.Mike GiamoISO New England Inc.Brian HaydukNew England Power CompanyMike HenryEnvironmental NortheastJohn HigginsNavigant ConsultingJim HylandMMWECJeff JonesBangor Hydro Electric CompanyTom KaslowGDF SuezBill KillgoarLong Island Power AuthorityRich KowalskiISO New England Inc.Abigail KrichBoreas RenewablesMarc LyonsISO New England Inc.Marc LyonsISO New England Inc.Marce MayPower InsightsAl McBrideISO New England Inc.Bruce McKinnonCMEECJohn MoskalU.S. EPABrent OberlinISO New England Inc.Daniel PattAlstomRose Ann PelletierMassachusetts Department of Public Utilities	Stan Doe	
Jeff FennBangor Hydro Electric CompanyTony FitzgeraldNortheast Utilities Service CompanyKevin FlynnISO New England Inc.Bill FowlerExelon/Equipower/Granite RidgeSteve GarwoodNew Hampshire TransmissionDon GatesISO New England Inc.Mike GiamoISO New England Inc.Brian HaydukNew England Power CompanyMike HenryEnvironmental NortheastJohn HigginsNavigant ConsultingJim HylandMMWECJeff JonesBangor Hydro Electric CompanyTom KaslowGDF SuezBill KillgoarLong Island Power AuthorityRich KowalskiISO New England Inc.Abigail KrichBoreas RenewablesMarc LyonsISO New England Inc.Marc LyonsISO New England Inc.Marce MayPower InsightsAl McBrideISO New England Inc.Bruce McKinnonCMEECJohn MoskalU.S. EPABrent OberlinISO New England Inc.Daniel PattAlstomRose Ann PelletierMassachusetts Department of Public Utilities	Frank Ettori	Vermont Electric Company
Tony FitzgeraldNortheast Utilities Service CompanyKevin FlynnISO New England Inc.Bill FowlerExelon/Equipower/Granite RidgeSteve GarwoodNew Hampshire TransmissionDon GatesISO New England Inc.Mike GiamoISO New England Inc.Brian HaydukNew England Power CompanyMike HenryEnvironmental NortheastJohn HigginsNavigant ConsultingJim HylandMMWECJeff JonesBangor Hydro Electric CompanyTom KaslowGDF SuezBill KillgoarLong Island Power AuthorityRich KowalskiISO New England Inc.Abigail KrichBoreas RenewablesMarry Jo KrolewskiVermont Public Utilities CommissionRobin LafayetteISO New England Inc.Marce LyonsISO New England Inc.Marce MayPower InsightsAl McBrideISO New England Inc.Bruce McKinnonCMEECJohn MoskalU.S. EPABrent OberlinISO New England Inc.Daniel PattAlstomRose Ann PelletierMassachusetts Department of Public Utilities	Jeff Fenn	
Bill FowlerExelon/Equipower/Granite RidgeSteve GarwoodNew Hampshire TransmissionDon GatesISO New England Inc.Mike GiamoISO New England Inc.Brian HaydukNew England Power CompanyMike HenryEnvironmental NortheastJohn HigginsNavigant ConsultingJim HylandMMWECJeff JonesBangor Hydro Electric CompanyTom KaslowGDF SuezBill KillgoarLong Island Power AuthorityRich KowalskiISO New England Inc.Abigail KrichBoreas RenewablesMaryJo KrolewskiVermont Public Utilities CommissionRobin LafayetteISO New England Inc.Marcice MayPower InsightsAl McBrideISO New England Inc.Bruce McKinnonCMEECJohn MoskalU.S. EPABrent OberlinISO New England Inc.Daniel PattAlstomRose Ann PelletierMassachusetts Department of Public Utilities	Tony Fitzgerald	
Steve GarwoodNew Hampshire TransmissionDon GatesISO New England Inc.Mike GiamoISO New England Inc.Brian HaydukNew England Power CompanyMike HenryEnvironmental NortheastJohn HigginsNavigant ConsultingJim HylandMMWECJeff JonesBangor Hydro Electric CompanyTom KaslowGDF SuezBill KillgoarLong Island Power AuthorityRich KowalskiISO New England Inc.Abigail KrichBoreas RenewablesMaryJo KrolewskiVermont Public Utilities CommissionRobin LafayetteISO New England Inc.Maurice MayPower InsightsAl McBrideISO New England Inc.Bruce McKinnonCMEECJohn MoskalU.S. EPABrent OberlinISO New England Inc.Daniel PattAlstomRose Ann PelletierMassachusetts Department of Public Utilities	Kevin Flynn	ISO New England Inc.
Steve GarwoodNew Hampshire TransmissionDon GatesISO New England Inc.Mike GiamoISO New England Inc.Brian HaydukNew England Power CompanyMike HenryEnvironmental NortheastJohn HigginsNavigant ConsultingJim HylandMMWECJeff JonesBangor Hydro Electric CompanyTom KaslowGDF SuezBill KillgoarLong Island Power AuthorityRich KowalskiISO New England Inc.Abigail KrichBoreas RenewablesMaryJo KrolewskiVermont Public Utilities CommissionRobin LafayetteISO New England Inc.Maurice MayPower InsightsAl McBrideISO New England Inc.Bruce McKinnonCMEECJohn MoskalU.S. EPABrent OberlinISO New England Inc.Daniel PattAlstomRose Ann PelletierMassachusetts Department of Public Utilities	Bill Fowler	Exelon/Equipower/Granite Ridge
Mike GiamoISO New England Inc.Brian HaydukNew England Power CompanyMike HenryEnvironmental NortheastJohn HigginsNavigant ConsultingJim HylandMMWECJeff JonesBangor Hydro Electric CompanyTom KaslowGDF SuezBill KillgoarLong Island Power AuthorityRich KowalskiISO New England Inc.Abigail KrichBoreas RenewablesMaryJo KrolewskiVermont Public Utilities CommissionRobin LafayetteISO New England Inc.Maurice MayPower InsightsAl McBrideISO New England Inc.Bruce McKinnonCMEECJohn MoskalU.S. EPABrent OberlinISO New England Inc.Daniel PattAlstomRose Ann PelletierMassachusetts Department of Public Utilities	Steve Garwood	New Hampshire Transmission
Brian HaydukNew England Power CompanyMike HenryEnvironmental NortheastJohn HigginsNavigant ConsultingJim HylandMMWECJeff JonesBangor Hydro Electric CompanyTom KaslowGDF SuezBill KillgoarLong Island Power AuthorityRich KowalskiISO New England Inc.Abigail KrichBoreas RenewablesMaryJo KrolewskiVermont Public Utilities CommissionRobin LafayetteISO New England Inc.Marc LyonsISO New England Inc.Maurice MayPower InsightsAl McBrideISO New England Inc.Bruce McKinnonCMEECJohn MoskalU.S. EPABrent OberlinISO New England Inc.Daniel PattAlstomRose Ann PelletierMassachusetts Department of Public Utilities	Don Gates	ISO New England Inc.
Mike HenryEnvironmental NortheastJohn HigginsNavigant ConsultingJim HylandMMWECJeff JonesBangor Hydro Electric CompanyTom KaslowGDF SuezBill KillgoarLong Island Power AuthorityRich KowalskiISO New England Inc.Abigail KrichBoreas RenewablesMaryJo KrolewskiVermont Public Utilities CommissionRobin LafayetteISO New England Inc.Marc LyonsISO New England Inc.Maurice MayPower InsightsAl McBrideISO New England Inc.Bruce McKinnonCMEECJohn MoskalU.S. EPABrent OberlinISO New England Inc.Daniel PattAlstomRose Ann PelletierMassachusetts Department of Public Utilities	Mike Giamo	ISO New England Inc.
John HigginsNavigant ConsultingJim HylandMMWECJeff JonesBangor Hydro Electric CompanyTom KaslowGDF SuezBill KillgoarLong Island Power AuthorityRich KowalskiISO New England Inc.Abigail KrichBoreas RenewablesMaryJo KrolewskiVermont Public Utilities CommissionRobin LafayetteISO New England Inc.Marc LyonsISO New England Inc.Maurice MayPower InsightsAl McBrideISO New England Inc.Bruce McKinnonCMEECJohn MoskalU.S. EPABrent OberlinISO New England Inc.Daniel PattAlstomRose Ann PelletierMassachusetts Department of Public Utilities	Brian Hayduk	New England Power Company
Jim HylandMMWECJeff JonesBangor Hydro Electric CompanyTom KaslowGDF SuezBill KillgoarLong Island Power AuthorityRich KowalskiISO New England Inc.Abigail KrichBoreas RenewablesMaryJo KrolewskiVermont Public Utilities CommissionRobin LafayetteISO New England Inc.Marc LyonsISO New England Inc.Maurice MayPower InsightsAl McBrideISO New England Inc.Bruce McKinnonCMEECJohn MoskalU.S. EPABrent OberlinISO New England Inc.Daniel PattAlstomRose Ann PelletierMassachusetts Department of Public Utilities	Mike Henry	Environmental Northeast
Jeff JonesBangor Hydro Electric CompanyTom KaslowGDF SuezBill KillgoarLong Island Power AuthorityRich KowalskiISO New England Inc.Abigail KrichBoreas RenewablesMaryJo KrolewskiVermont Public Utilities CommissionRobin LafayetteISO New England Inc.Marc LyonsISO New England Inc.Maurice MayPower InsightsAl McBrideISO New England Inc.Bruce McKinnonCMEECJohn MoskalU.S. EPABrent OberlinISO New England Inc.Daniel PattAlstomRose Ann PelletierMassachusetts Department of Public Utilities	John Higgins	Navigant Consulting
Tom KaslowGDF SuezBill KillgoarLong Island Power AuthorityRich KowalskiISO New England Inc.Abigail KrichBoreas RenewablesMaryJo KrolewskiVermont Public Utilities CommissionRobin LafayetteISO New England Inc.Marc LyonsISO New England Inc.Maurice MayPower InsightsAl McBrideISO New England Inc.Bruce McKinnonCMEECJohn MoskalU.S. EPABrent OberlinISO New England Inc.Daniel PattAlstomRose Ann PelletierMassachusetts Department of Public Utilities	Jim Hyland	MMWEC
Bill KillgoarLong Island Power AuthorityRich KowalskiISO New England Inc.Abigail KrichBoreas RenewablesMaryJo KrolewskiVermont Public Utilities CommissionRobin LafayetteISO New England Inc.Marc LyonsISO New England Inc.Maurice MayPower InsightsAl McBrideISO New England Inc.Bruce McKinnonCMEECJohn MoskalU.S. EPABrent OberlinISO New England Inc.Daniel PattAlstomRose Ann PelletierMassachusetts Department of Public Utilities	Jeff Jones	Bangor Hydro Electric Company
Rich KowalskiISO New England Inc.Abigail KrichBoreas RenewablesMaryJo KrolewskiVermont Public Utilities CommissionRobin LafayetteISO New England Inc.Marc LyonsISO New England Inc.Maurice MayPower InsightsAl McBrideISO New England Inc.Bruce McKinnonCMEECJohn MoskalU.S. EPABrent OberlinISO New England Inc.Daniel PattAlstomRose Ann PelletierMassachusetts Department of Public Utilities	Tom Kaslow	GDF Suez
Abigail KrichBoreas RenewablesMaryJo KrolewskiVermont Public Utilities CommissionRobin LafayetteISO New England Inc.Marc LyonsISO New England Inc.Maurice MayPower InsightsAl McBrideISO New England Inc.Bruce McKinnonCMEECJohn MoskalU.S. EPABrent OberlinISO New England Inc.Daniel PattAlstomRose Ann PelletierMassachusetts Department of Public Utilities	Bill Killgoar	Long Island Power Authority
MaryJo KrolewskiVermont Public Utilities CommissionRobin LafayetteISO New England Inc.Marc LyonsISO New England Inc.Maurice MayPower InsightsAl McBrideISO New England Inc.Bruce McKinnonCMEECJohn MoskalU.S. EPABrent OberlinISO New England Inc.Daniel PattAlstomRose Ann PelletierMassachusetts Department of Public Utilities	Rich Kowalski	ISO New England Inc.
Robin LafayetteISO New England Inc.Marc LyonsISO New England Inc.Maurice MayPower InsightsAl McBrideISO New England Inc.Bruce McKinnonCMEECJohn MoskalU.S. EPABrent OberlinISO New England Inc.Daniel PattAlstomRose Ann PelletierMassachusetts Department of Public Utilities	Abigail Krich	Boreas Renewables
Marc LyonsISO New England Inc.Maurice MayPower InsightsAl McBrideISO New England Inc.Bruce McKinnonCMEECJohn MoskalU.S. EPABrent OberlinISO New England Inc.Daniel PattAlstomRose Ann PelletierMassachusetts Department of Public Utilities	MaryJo Krolewski	Vermont Public Utilities Commission
Maurice MayPower InsightsAl McBrideISO New England Inc.Bruce McKinnonCMEECJohn MoskalU.S. EPABrent OberlinISO New England Inc.Daniel PattAlstomRose Ann PelletierMassachusetts Department of Public Utilities	Robin Lafayette	ISO New England Inc.
Al McBrideISO New England Inc.Bruce McKinnonCMEECJohn MoskalU.S. EPABrent OberlinISO New England Inc.Daniel PattAlstomRose Ann PelletierMassachusetts Department of Public Utilities	Marc Lyons	ISO New England Inc.
Bruce McKinnonCMEECJohn MoskalU.S. EPABrent OberlinISO New England Inc.Daniel PattAlstomRose Ann PelletierMassachusetts Department of Public Utilities	Maurice May	Power Insights
John MoskalU.S. EPABrent OberlinISO New England Inc.Daniel PattAlstomRose Ann PelletierMassachusetts Department of Public Utilities	Al McBride	ISO New England Inc.
Brent OberlinISO New England Inc.Daniel PattAlstomRose Ann PelletierMassachusetts Department of Public Utilities	Bruce McKinnon	CMEEC
Daniel Patt Alstom Rose Ann Pelletier Massachusetts Department of Public Utilities	John Moskal	U.S. EPA
Rose Ann Pelletier Massachusetts Department of Public Utilities	Brent Oberlin	ISO New England Inc.
	Daniel Patt	Alstom
	Rose Ann Pelletier	Massachusetts Department of Public Utilities
	Kevin Petale	ICF

Fred Plett	Massachusetts Attorney General Office
Hantz Presume	Vermont Electric Company
Francis Pullaro	ReNew New England
Eric Runge	Day Pitney
Patricio Silva	ISO New England Inc.
Allison Smith	NESCOE
Doug Smith	Green Mountain Power Company
Joe Staszowski	Northeast Utilities Service Company
Robert Stein	HQUS
Veronica Szczerkowski	Connecticut Department of Public Utilities
Matt Valle	New Hampshire Transmission
Pradip Vijayan	ISO New England Inc.
Sharon Webber	PPL Energy Plus
Jinlin Zhang	ISO New Enbgland Inc.

Item 1 – Chair's Remarks

Mr. Don Gates welcomed the committee and reviewed the day's agenda. Mr. Gates announced that some addition PAC meeting minutes have been posted for review. Please send any comments to Mr. Marc Lyons (ISO). Mr. Gates also briefed the committee on the inclement weather procedure.

Item 2 – EIPC Gas/Electric Update

Mr. Mark Babula (ISO) provided an overview of the EIPC Gas/Electric study work efforts to date.

There were no questions from the committee on this topic.

Item 3 – ICF Natural Gas White Paper

Mr. Kevin Petak (ICF) and Mr. Frank Brock (ICF) provided an overview of the ICF Natural Gas White Paper.

Comment – *Stakeholders commented that while they believe it is important to add pipeline infrastructure in New England, they feel a higher priority should be more flexibility in the timing of the day ahead market so gas nominations can be made earlier in the day.*

Q - Should fuel contracts be considered as part of a generator interconnection agreement? A – We can take that back to ISO for discussion.

Q-I see an issue with the proposed 15 minute scheduling over the ties. The IMM and EMM should be prepared for volatility when unscheduled gas is pulled off the system once this program goes into effect.

A – We can take that back to ISO for discussion.

Other clarifying questions on the charts and graphs within the presentations were asked and responded to by Mr. Petak and Mr. Brock.

Item 4 – Maine 2023 Needs Assessment Scope of Work

Ms. Jinlin Zhang (ISO) provided an overview of the Maine 2023 Needs Assessment Scope of Work.

Q-It's been around 7 years since the last Maine study. What is the timeframe standard for relooking at an area? We haven't even finished constructing MPRP yet.

A - We do not have a specific timetable. However, depending on the size of the project, by the time you finish the initial area study work, approve and then construct the resulting project solution, it only gives roughly a two year useful window before the area in question should be looked at again.

Q – Will the proposed Northern Pass Transmission line be included as part of the study as a sensitivity?

A – The project scope states all approved projects as of October 2013, plus MPRP, will be used in the study.

Comment -I would recommend that unless significant computer inputs has been performed already, I recommend revising the October cutoff date so the Northern Pass project can be added to the study.

Q - Will you look at specific contingencies on the 34.5 kV?

A - No. We will assess 34.5 kV voltage and thermal issues as it directly impacts the BES system. Q - I recommend that if you do not find any issues with the 2023 peak load, I recommend adding and analyzing additional load until you do discover a problem so ISO will know where the tipping point is.

A - That is not part of our process when we analyze an area. It is also extremely unlike that we will not discover some issues that will need to be addressed.

Comment – NESCOE recently performed some research illustrating some ISO study analysis that reviews scenarios that are extremely unlikely to occur. NESCOE recommends that you ignore those extremely rare events and we ask that you keep this in mind as you perform this study work.

Comment – Going forward, ISO will no longer be studying the impacts of export capability as part of the overall study area review. ISO will soon be developing a point paper detailing the specifics of this concept that will be distributed to the PAC.

Item 5 – Greater Hartford/Central Connecticut Needs Assessment

Mr. Pradip Vijayan (ISO) provided an overview of the Greater Hartford/Central Connecticut Needs Assessment.

Q - As part of the study will ISO look at alternative resource solutions?

A – If something clears in FCM and it impacts the GHCC project, we will consider it.

Other minor clarification questions were asked and responded to by Mr. Vijayan and Mr. Brent Oberlin (ISO).

Item 6 – Greater Boston 2023 Needs Assessment Solution Study Update

Mr. Andrew Kniska (ISO) provided an overview of the Greater Boston 2023 Needs Assessment Solution Study Update.

Q – Can you comment on why the New Boston site is no longer being considered for the Sealink DC cable.

A – When the New Boston generators retired, three new transmission lines were installed into the area. If the Sealink cable is added to that location it would create an export constraint condition.

Several technical questions regarding the study were asked and responded to by Mr. Kniska and Mr. Brent Oberlin (ISO).

Item 7 – NGrid Transmission Refurbishments Update to Salem Harbor Cable Replacement Mr. George Delovraro (NEP) and Mr. Jack Martin (NEP) provided an overview of the NGrid Transmission Refurbishments Update to Salem Harbor Cable Replacement.

- Q-How long are the cables?
- A Approximately 1 $\frac{1}{2}$ miles.
- Q-By using a common duct are you creating the potential for a common mode failure?
- A It is possible but we consider the risk as highly unlikely.

Q-By using a single duct bank, does that reduce construction times?

A - Yes, a construction of a single duct bank is estimated to be 18 month versus two years for dual duct banks.

Item 8 – NGrid Asset Condition Needs: 115 kV Salem Harbor Substation

Mr. Jim Wynn (NEP) and Mr. Jack Martin (NEP) provided an overview of the NGrid Asset Condition Needs: 115 kV Salem Harbor Substation.

Comment – It seems that the -50%/+200% project costs is too vague. Can you return to the committee and provide some more cost certainty. Something on the lines of a +/- 25% A - Yes we plan to narrow those estimates down in the near future.

Other minor clarification questions were asked and responded to by Mr. Wynn.

Item 9 – Peaslee Switching Station Project

Mr. Jim DiLuca (NU) provided an overview of the Peaslee Switching Station Project.

There were no questions from the committee on this topic.

Planning Advisory Committee meeting adjourned at 12:50 PM

Respectively submitted

Marc Lyons Secretary, Planning Advisory Committee

Transmission Owners Planning Advisory Committee (TOPAC)

Item 10 – Northeast Utilities/NStar Local System Plan

Mr. Brad Bentley (NU) provided an overview of the NU/NStar Local System Plan (LSP). As this is part of the TOPAC meeting, no formal minutes or notes will be taken.

Item 11 – Central Maine Power Company Local System Plan

Mr. Curt Beveridge (CMP) provided an overview of the CMP Local System Plan (LSP). As this is part of the TOPAC meeting, no formal minutes or notes will be taken.

Item 12 – Vermont Electric Company Local System Plan

Mr. Hantz Presume (VELCO) provided an overview of the VELCO Local System Plan (LSP). As this is part of the TOPAC meeting, no formal minutes or notes will be taken.