

Climate Change Advisory Committee Meeting

March 18, 2010

Welcome & Introductions

Members Proxy and Sign-In



Agenda

- Action Item:
 - Approval of January 12th Meeting Minutes
- Overview of Alcoa Inc. Climate Program
- Adaptation Introduction
 - Kick-Off Meeting Draft Agenda
 - Establishment of Working Groups
- Implementation of Action Plan Update
 - DGS Report on Government Energy Savings
 - State Legislative Initiatives
- Low Carbon Fuel Standard Update
- Next CCAC Meeting: May 20th
- Public Comment

Alcoa Inc. Climate Program

- Overview of Alcoa Inc. Initiatives -
New CCAC member Robert Bear

Action Item – Approval of Minutes

- January 12, 2010 Meeting
 - Questions or comments prior to action?
 - Motion to approve; second; vote

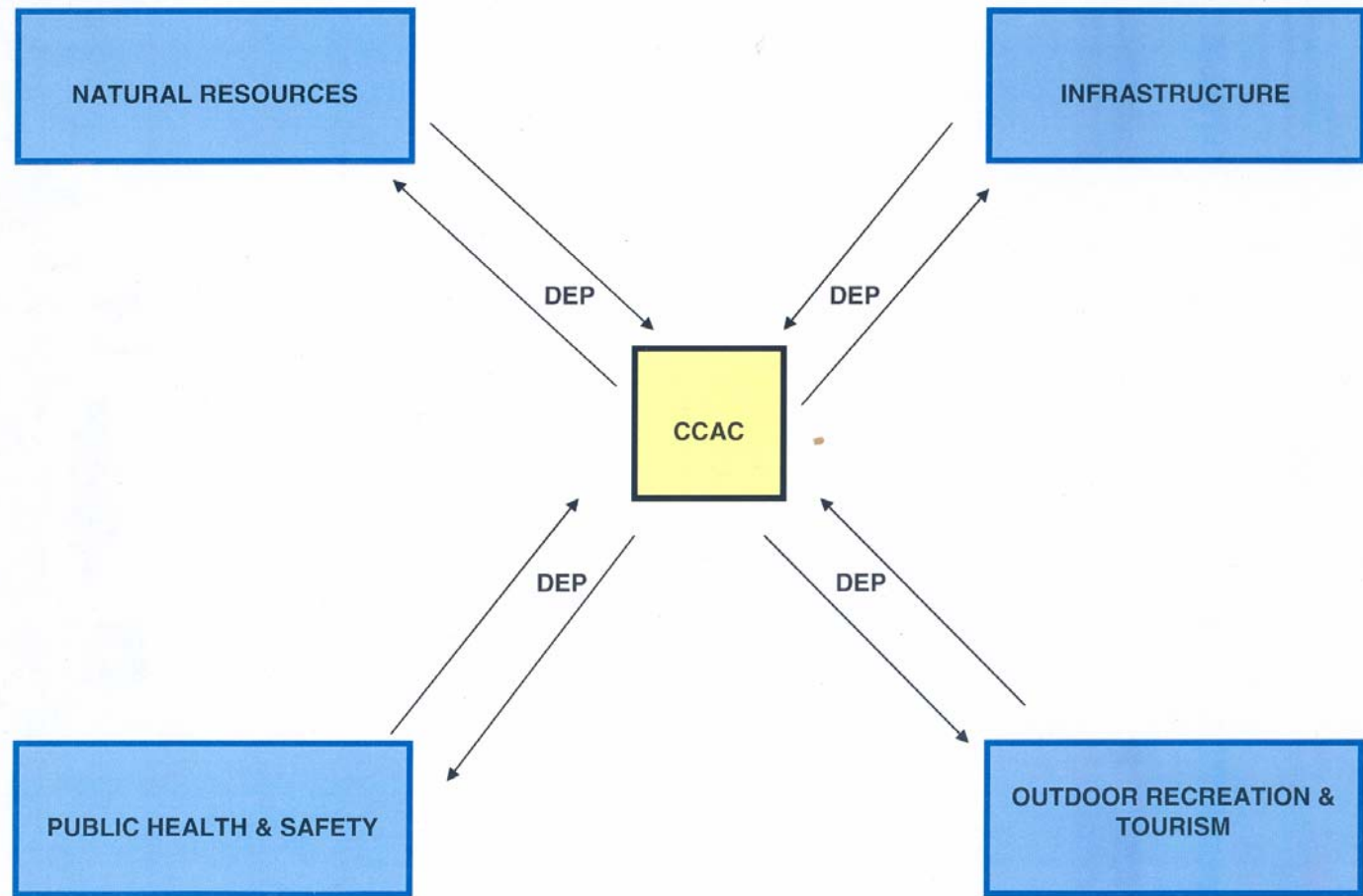
Adaptation Introduction

- Adaptation to Climate Change Kick-Off Meeting Draft Agenda and Invite:
 - March 24th from 10:00 AM to 12:30 PM
 - Rachel Carson Building Auditorium
 - Public meeting
 - Over 180 invites have been sent via email
- Goal for Kick-Off is to build support and encourage participation from stakeholders.
- Collaboration and sharing information across all boundaries is necessary.
- Input from CCAC members is voluntary and active participation in the working groups is encouraged.

Statewide Adaptation Process

- Bring together key stakeholders to discuss the priorities and provide practical recommendations.
- Establish working groups for these broad categories:
 1. Natural resources (forests, agriculture, surface water)
 2. Public Health and Safety (public health, emergency response, economically depressed communities)
 3. Infrastructure (transportation, land use, water, energy, insurance)
 1. Tourism and Outdoor Recreation (regional tourism, hunting and fishing organizations, ski resorts)

Climate Change Adaptation Working Group Flow Diagram



Statewide Adaptation Process

DEP will guide the agendas for the working group meetings.

- Timeframe is April 2010 to January 2011
- Approximately 5 bimonthly meetings
- Last meeting for all participants to share key outcomes and keep the process evolving (not once and done).
- Expected outcome is a white paper to be developed by each group.

Statewide Adaptation Process

- Chairs are envisioned to lead each of the working groups.
 - 2 Co-chairs, ideally one from state agency and one from non-government organization
 - Goal is for co-chairs to assist in bringing stakeholders to the table

Implementation of Action Plan

Next Steps - Pathways for Implementation

- DGS Report on Government Energy Savings – Todd Garrison
- State Legislative Initiatives
 - HB 444– Dennis Maloskey
 - Energy Efficiency Appliance Standards – Libby Dodson
 - Alternative Energy Portfolio Standard proposal – Andrew Place

State Legislative Initiatives

- **HB 444:** “Requiring the design, construction and renovation of buildings that receive a State appropriation to comply with specified energy and environmental building standards”
 - aka “Green Strings”
 - NOT a “Code”
- **Green Building Codes**
 - ICC IgCC
 - ANSI / ASHRAE / USGBC / IES Standard 189.1

HB 444 - Intent

- High-Performance, State-Funded Buildings Standards Act
 1. Promote effective energy and environmental standards
 2. Optimize building energy performance
 3. Increase the demand for EP materials, finishes and furnishings
 4. Improve environmental quality
 5. Create public awareness
 6. Improve working conditions & reduce building related health problems
 7. Reduce dependence on imported energy sources
 8. Protect and restore natural resources
 9. Reduce burden on municipal water supply and treatment
 10. Reduce waste generation
 11. Improve PA's capacity to design, build and operate high-performance buildings (create jobs)

HB 444 - Applicability

- Facilities Owned By A Commonwealth Agency
- State-funded (in whole or in part) Major Facility Projects
 - New Construction: > 20 kSF
 - Renovation: > \$1,000,000 State Funds
 - New Construction Lease: > 10 kSF & 90% CWoPA
- Must have conditioned space per ASHRAE Standard 90.1

HB 444 – Standards (TBD)

- Consensus-based
- Performance-based
- Verifiable, Substantiated Documentation
- 3rd Party Verification
- Track Record of Certified Green Buildings
- Certification Level: TBD (1 above minimum)
- Energy Star Rating: 85 or above

HB 444 – Status

- PA House:
 - First consideration: March 17, 2009 (26-0)
 - Second consideration, with amendments:
July 8, 2009 (31-0-4)
 - Third consideration and final passage:
July 13, 2009 (180-17-6)
- PA Senate:
 - Referred to Environmental Resources & Energy:
July 17, 2009

Green Building Codes

- **ICC IgCC**
- **ANSI / ASHRAE / USGBC / IES Standard 189.1**

Green Building Codes - IgCC

- **ICC IgCC**

- **International Code Council *International Green Construction Code* aka: “*Safe and Sustainable: By the Book*”**
 - Public Version 1.0, released March 16, 2010
- <http://www.iccsafe.org/cs/IGCC/Pages/default.aspx#>

Green Building Codes - IgCC

- Uses “model” code approach
- Establishes minimum & advanced levels of performance (green & high performance buildings)
- Works as an overlay to the ICC code family
- Written in mandatory language that provides a new regulatory framework
- Provides performance, prescriptive and pre-engineered solutions
- Accounts for local conditions (flood areas, greenfield sites, light pollution, etc.)
- Reflects AIA 2030 challenge
- Works in tandem with leading green rating systems
- Designed with local, state & federal law in mind

Green Building Codes - IgCC

Design Principles (Framework)

- Adoptable
 - Enforceable
 - Usable
-
- Chapter 1: Administration
 - Chapter 3: Jurisdictional Requirements & Project Electives
 - Chapter 4: Site Development & Land Use
 - Chapter 5: Material Resource Conservation & Efficiency

Green Building Codes - IgCC

- Chapter 6: Energy Conservation, Efficiency & Atmospheric Quality
- Chapter 7: Water Resource Conservation & Efficiency
- Chapter 8: Indoor Environmental Quality & Comfort
- Chapter 9: Commissioning, Operation & Maintenance
- Chapter 10: Existing Buildings
- Chapter 11: Existing Building Site Development

- Appendix A: Optional Ordinance
- Appendix B: Greenhouse Gas Reductions In Existing Buildings
- Appendix C: Sustainability Measures

Green Building Codes – 189.1

- ANSI / ASHRAE / USGBC / IES Standard 189.1
- Jurisdictional Compliance Option of the IGCC
- Written in Codified Language
- Purpose: The purpose of this standard is to provide minimum requirements for the siting, design, construction, and plan for operation of high-performance green buildings to:
 - a) balance environmental responsibility, resource efficiency, occupant comfort and well being, and community sensitivity, and
 - b) support the goal of development that meets the needs of the present without compromising the ability of future generations to meet their own needs

Green Building Codes – 189.1

- Section 5: Site Sustainability
- Section 6: Water Use Efficiency
- Section 7: Energy Efficiency
- Section 8: Indoor Environmental Quality (IEQ)
- Section 9: The Building's Impact on the Atmosphere, Materials and Resources
- Section 10: Construction and Plans for Operation

Green Building Codes – 189.1

Normative Appendices

- A: Prescriptive Building Envelope Tables
- B: Prescriptive Continuous Air Barrier
- C: Prescriptive Equipment efficiency Tables
- D: Performance Option for Energy Efficiency
- E: IEQ Limit Requirements for Office Furniture Systems & Seating
- F: Building Concentrations
- G: Informative References
- H: Integrated Design

Why do we need Green Legislation and Green Codes ?

- Pennsylvania emits approximately 1% of the World's Greenhouse Gases
 1. Electricity Production = 38% of all emissions
 - Buildings (RCI) are the primary consumer of electricity (~90 %)
 2. Residential / Commercial / Industrial = 31% emissions
 - Construction + On-site fuel use (coal, natural gas, oil and wood)

**Total Building Related Emissions (RCI):
~65%**

Energy Efficiency Appliance Standards

- Background- previous state energy efficiency appliance standards legislation (SB901)
- Had large support but did not pass due to favor of the AEPS
- NEEP contacted PA DEP with updated appliance efficiency standards
- NEEP provided model legislation to

Energy Efficiency Appliance Standards

- PA DEP Legal Counsel drafting PA specific legislation
- Legislation Includes efficiency standards for products sold or installed in PA
- Products are not regulated by US DOE
- CA adopted legislation with similar standards last November 2009
- Northeastern states are considering similar legislation

Energy Efficiency Appliance Standards

- The provisions of this Act apply to the following types of new products sold, offered for sale, or installed in the state:
 - (1) bottle-type water dispensers;
 - (2) commercial hot food holding cabinets;
 - (3) portable electric spas;
 - (4) portable light fixtures
 - (5) residential pool pumps, residential pool pump motors and residential pool pump motor controls;
 - (6) televisions; and
 - (7) any other products as may be designated by the Commissioner

Energy Efficiency Appliance Standards

- Provisions of the Act that do not apply-
- (1) new products manufactured in the state and sold outside the state;
- (2) new products manufactured outside the state and sold at wholesale inside the state for final retail sale and installation outside the state;
- (3) products installed in mobile manufactured homes at the time of construction; or
- (4) products designed expressly for installation and use in recreational vehicles.

Energy Efficiency Appliance Standards

- Effective no later than one year after date of enactment of legislation
- Provisions for new standards by Commissioner
- Testing, certification, labeling and enforcement

Energy Efficiency Appliance Standards

- Electricity Savings in Pennsylvania...870 GWh/year by 2020 (approximately equivalent to meeting the needs of over 100,000 homes)
- Emission Reductions in Pennsylvania....620,000 MT of CO₂/year by 2020 (approximately equivalent to taking 100,000 cars off the road)
- Economic benefits to Pennsylvania consumers....\$670 Million (Net Present Value in economic Savings)

Energy Efficiency Appliance Standards

- Other state's efforts-
 - CA enacted legislation
 - CT and MD
 - MA
 - NYSERDA
 - Washington
 - DC

Northeast and Mid-Atlantic Low Carbon Fuel Standard (LCFS) Framework Development

- LCFS Update - Brian Trowbridge

Next CCAC Meeting: May 20th

Possible Agenda Items:

- Coal Mine Methane – Consol
- Center for Local Government Services – DCED
- ICLEI software for Community GHG Inventory – Dennis Maloskey
- Other ideas?

Public Comment

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