



# **Barnwell Low-Level Radioactive Waste Disposal Facility In-Region Operating Costs**

**Presented to:  
Atlantic Compact Commission  
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# **Barnwell LLRW Disposal Site Presentation Summary**

- **Barnwell LLRW Disposal Site Status**
- **In-Region Operations / Phase I  
Closure Transition Planning**
- **Post 2008 Operations Plan**

# Barnwell LLRW Disposal Site Status

## ■ License Status

- Timely Renewal status since 2000
- In Appeal Process since 2004

## ■ Current Operating Scenario

- Three trench designs
- Full time receipt of Class A, B, & C wastes
- Acceptance of routine waste forms plus irradiated hardware and large components

## ■ Closure Activities Completed

- 96 acres of Enhanced Cap installed
- West Pond storm water management system completed

# **Barnwell LLRW Disposal Site Transition / Closure Activities**

- **Capping project for 7 acres scheduled to start in April 2008**
- **Phase I closure starts July, 2008**
  - D&D several onsite buildings
  - Cap remaining completed trenches
  - Grade site to final topography
  - Eliminate unnecessary equipment
  - Verify performance objectives

# Class B/C Trench



# General Cost Estimating Assumptions

- Existing regulatory and license requirements
- Cost structure generally based on PSC application structure
- Labor and material costs based on FY 06-07 rates
- License fees and other reimbursable costs outside the control of site operator based on FY 06-07 rates and recent DHEC request
- Waste volume assumptions based on discussions with Atlantic Compact utilities

# **Institutional Costs (Completed Portion of Site)**

- **Environmental monitoring**
- **Basic Site Maintenance**
- **Security**
- **Insurance**
- **Utilities and support**
- **License fees**

# Institutional Costs (Completed Portion of Site)

<b>Category of Costs</b>	<b>Annual Estimate</b>
<b>Environmental Monitoring</b>	<b>\$577,804</b>
<b>Site Maintenance</b>	<b>\$165,896</b>
<b>Site Security</b>	<b>\$237,151</b>
<b>Utilities, Accounting, etc.</b>	<b>\$251,772</b>
<b>Site Operator Costs Total</b>	<b>\$1,232,624</b>
<b>G&amp;A and Margin (14%)</b>	<b>\$361,138</b>
<b>License Fees</b>	<b>\$421,505</b>
<b>Total Institutional Costs</b>	<b>\$2,015,267</b>

## **In-Region Class A,B,C Scenario**

- **Waste acceptance throughout the year**
- **Disposal of waste when it is received**
- **One trench design for routine wastes**
- **Disposal of irradiated hardware and large components not included in cost estimates**

# 11,000 Cubic Feet Class A,B,C Costs

<b>Category of Costs</b>	<b>Annual Estimate</b>
<b>Fixed Costs</b>	<b>\$4,376,967</b>
<b>Variable Costs</b>	<b>\$592,456</b>
<b>Irregular Costs</b>	<b>\$126,000</b>
<b>Site Operator Costs Total</b>	<b>\$5,095,423</b>
<b>Statutory Margin</b>	<b>\$1,477,673</b>
<b>Reimbursable Costs</b>	<b>\$1,018,966</b>
<b>Total Operating Costs</b>	<b>\$7,592,062</b>

# Conclusions

(unchanged from 10/25/07)

- **Low volumes will require significant changes in waste acceptance and operating approach**
- **Completed Site Activities must continue, but should not be the burden of Atlantic Compact generators**
- **Transition Period to In-Region Operations**
  - 2 – 3 year time frame
  - Phase I closure activities and acceptance
  - Continued use of existing trenches
  - Held waste receipt and disposal
  - Procedure revisions and approvals
- **It appears that existing disposal pricing with sufficient waste volume could cover the direct costs of In-Region Operations disposal**

# **Compact Commission Meeting Results (10/25/07)**

- **We are working with generators to find a solutions that works for everyone**
- **Special pricing input to SC Energy Office**
- **Mode of operation generally agreed**
- **Three major parties in agreement that institutional costs should be funded from Decommissioning Trust Fund or Long Term Care Fund**

# Actions Since 10/25/07

- **Met with Atlantic Compact utility reps to develop a plan**
  - Revenue to cover total operating costs
  - Legally binding mechanism to cover costs
  - Consider actions by Compact Commission, Budget and Control Board, site operator, and/or generators to make it work
- **Met with SC Energy Office staff to discuss results**

# Where we are today

- **Three Memoranda of Understanding (MoU)**
  - Energy *Solutions* and B&CB
  - Energy *Solutions* and compact utilities
    - For FY 2009
  - Energy *Solutions* and compact utilities
    - For FY 2010
- **MoUs to capture key points of the plan, demonstrate commitments, and provide key assurances to each party**

## **FY 2009 Revenue Assumptions**

**(\$ in millions)**

<b>8,240 cu.ft. routine waste at special pricing</b>	<b>\$2.91</b>
<b>5,000 cu.ft. of held waste at agreement pricing</b>	<b>\$1.15</b>
<b>Carry over revenues</b>	<b>\$2.00</b>
<b>Revenue from other in- region generators</b>	<b>\$0.30</b>
<b>Total Revenue</b>	<b>\$6.36</b>

# FY 2009 Assumed Costs vs Revenue

	<b>13,240 cu.ft. Disposal Costs</b>	<b>Institutional Costs</b>
<b>Operations</b>	<b>\$3.20</b>	<b>\$1.42</b>
<b>G&amp;A</b>	<b>\$0.40</b>	<b>\$0.16</b>
<b>Margin/Fee</b>	<b>\$1.05</b>	<b>\$0.22</b>
<b>Reimbursables</b>	<b>\$1.09</b>	<b>\$0.22</b>
<b>Total Costs</b>	<b>\$5.74</b>	<b>\$2.02</b>
<b>Revenue</b>	<b>\$6.36</b>	
<b>Difference</b>	<b>\$0.62</b>	

## Other key assumptions

- Allowable costs consistent with most recent PSC hearing
- Statutory margin on allowable costs for disposal operations is 29%
- No margin on taxes and fees
- Proposed margin for allowable institutional costs is 14%

## **FY 2010 Revenue Assumptions (\$ in millions)**

<b>Annual Cooperative Commitment Payment (\$0.313 per reactor)</b>	<b>\$4.07</b>
<b>Disposal revenue from other in-region generators</b>	<b>\$0.30</b>
<b>Total Revenue</b>	<b>\$4.37</b>

# FY 2010 Assumed Costs vs Revenue

	<b>9,000 cu.ft. Disposal Costs</b>	<b>Institutional Costs</b>
<b>Operations</b>	<b>\$2.64</b>	<b>\$1.42</b>
<b>G&amp;A</b>	<b>\$0.32</b>	<b>\$0.16</b>
<b>Margin/Fee</b>	<b>\$0.86</b>	<b>\$0.22</b>
<b>Reimbursables</b>	<b>\$0.92</b>	<b>\$0.22</b>
<b>Total Costs</b>	<b>\$4.74</b>	<b>\$2.02</b>
<b>Revenue</b>	<b>\$4.37</b>	
<b>Difference</b>	<b>(\$0.37)</b>	