Agenda

• Brief CT SOLID WASTE SYSTEM (CSWS) overview
• Challenges facing MIRA and the industry
• How MIRA is adapting to face those challenges
• Tip fee history and FY17 overview
• The MIRA advantage
• Outlook
By its original design, MIRA, then CRRA, Projects were intended to be:

- Replacement for municipal landfills.
- Publicly owned but operated utilizing the private sector.
- Tax exempt and not-for-profit.
- Funded independently through tip fees and revenues, not state budget.
- Fee limited to the Net Cost of Operation.
- Operation in the public interest of the municipalities.
• MIDCONN, now CSWS was designed as a Hub-and-spoke system.
• System hub
  – PBF/EGF produces renewable electricity
    • Redeveloped a historic 1920’s-era power plant in 1980s.
    • Since then, the Plant has made renewable energy from waste instead of energy from coal or oil.
  – WPF processes waste into RDF
    • Extracts scrap metals
    • Utilized existing infrastructure at PBF
  – Recycling facility
    • Separates single-stream recyclables, then processes and ships commodities to manufacturers
• **System spokes**

  – **Transfer stations**
    • Active stations in Essex, Torrington and Watertown
    • Also currently-inactive station in Ellington

  – **Symbiotic & socialized cost**
    • Convenient points of entry for towns and haulers outside greater Hartford region.
    • Transfer stations provide tonnage needed to support the system which is not available exclusively inside greater Hartford region.
    • All municipalities get same tip fee as their peers that signed the same Tiered agreement.

February 24, 2016
Challenges & Tip Fee Impacts

- **Two Critical Challenges:**
  1. Revenue
  2. Aging of the Facility

- **The System Depends on Two Revenue Streams:**
  - Electric Energy sales and,
  - Trash/Waste Tipping fees

- **Energy Prices are at unprecedented low levels!**
  - Mid CT project energy sales price (FY2013): $85/MWH
  - CSWS Energy Sales Price (FY2017): $43.40/MWH
  - Annual Revenue reduction due to price drop: $17.2 million or $23/ton
Challenges

• Wholesale electricity price negatively impacted by declining natural gas price.

NYMEX Natural Gas Price

$ / MM Btu

As per MSA’s

- \((\text{Cost of Operation}) - (\text{Non-Disposal Fee Revenue}) = \text{Net cost of operation}\)
- \((\text{Net Cost of Operation})/(\text{Tons of waste}) = \text{Base Tip Fee}\)
- When net cost of operation increases, increased use of Tip Fee Stabilization Fund (cash reserves) is needed to mitigate tip fee fluctuations.
Challenges

• Cheap energy impacts revenues
  – Trash to Energy is CT’s most significant source of renewable Energy BUT
  – Trash to energy does not enjoy class 1 Renewable Energy Credits enjoyed by Solar, fuel cell, wind, hydro etc.

• Downward pressure on recycling markets
  • Cheap energy makes virgin materials more price competitive with recycled commodities

• MIRA’s Facilities are nearing end of their economic useful life:
  – Trends toward increasing maintenance costs and declining performance.
Challenges

- **Energy revenue**

<table>
<thead>
<tr>
<th>Year</th>
<th>Millions</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY14</td>
<td>$26.81</td>
</tr>
<tr>
<td>FY15</td>
<td>$17.98</td>
</tr>
<tr>
<td>FY16</td>
<td>$22.52</td>
</tr>
<tr>
<td>FY17</td>
<td>$18.96</td>
</tr>
</tbody>
</table>

February 24, 2016
Challenges

• Recyclables and metals sales
Challenges

- Indexed recycling commodity value/ton

<table>
<thead>
<tr>
<th></th>
<th>Average Value/ton 2010-2014</th>
<th>Current Value/ton (Feb 2016)</th>
<th>Approximate percentage of outbound commodity tons from CSWS recycling facility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardboard (OCC)</td>
<td>$126</td>
<td>$85</td>
<td>15%</td>
</tr>
<tr>
<td>Paper (#8 News)</td>
<td>$83</td>
<td>$60</td>
<td>50%</td>
</tr>
</tbody>
</table>

- From Yellow Sheet Price Index (NY Market, High Side) - Price index reflects expected price paid by mills for truckload quantities of baled commodity.
### Challenges

- **FY 16 Variance through Dec 31, 2015**

<table>
<thead>
<tr>
<th></th>
<th>YTD Budget</th>
<th>YTD Actuals</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Electricity Sales</strong></td>
<td>$9,348,497</td>
<td>$6,561,461</td>
<td>-30%</td>
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<tr>
<td><strong>Revenue</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Recycling Sales</strong></td>
<td>$630,217</td>
<td>$530,586</td>
<td>-16%</td>
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<tr>
<td><strong>Revenue</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td><strong>Metal Sales</strong></td>
<td>$877,612</td>
<td>$300,476</td>
<td>-66%</td>
</tr>
<tr>
<td><strong>Revenue</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Interruptible</strong></td>
<td>$3,558,645</td>
<td>$1,735,757</td>
<td>-51%</td>
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<tr>
<td><strong>Contract &amp; Spot</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Revenue</strong></td>
<td></td>
<td></td>
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</tr>
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</table>
Adapting to Face the Challenges

• Reduction in Admin and other expenses. (office move to Rocky Hill)

• From Jan 1, 2015 to June 30, 2016, sold ½ of electrical production from PBF at favorable fixed rate to reduce downside market risk.

• Use of tip-fee stabilization fund to mitigate tip-fee fluctuations. (Additional MIRA ‘other’ revenue available in FY2018)

• Reduce recycling rebate until sales revenue supports reinstatement of rebate.

• Increase in capital and maintenance spending at the PBF to manage legacy issues and reduce down time.

• NOTE: MIRA will need to continue accessing ‘other’ revenue to subsidize operating revenue to maintain acceptable tipping fees
Adapting to Face the Challenges

• Administrative costs: HR expenditures
  (total Authority)

<table>
<thead>
<tr>
<th>Years</th>
<th>FY10</th>
<th>FY11</th>
<th>FY12</th>
<th>FY13</th>
<th>FY14</th>
<th>FY15</th>
<th>FY16</th>
<th>FY17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Millions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>$4.50</td>
<td>$5.00</td>
<td>$5.50</td>
<td>$6.00</td>
<td>$6.50</td>
<td>$6.00</td>
<td>$5.50</td>
<td>$5.00</td>
<td>$4.50</td>
</tr>
</tbody>
</table>

Adopted Budget

February 24, 2016
FY 17 Overview & Tip Fees

• FY 17 budget goals:
  – Offset the continuing decline in revenues
  – Maintain critical maintenance spending as per Strategic Plan
  – Ensure adequate resources available to tip fee stabilization fund (Subsidy)

• Solution: $2/ton increase
  – FY 17 fee still $5 less than FY 2011 tip fee
  – Use of tip fee stabilization fund to mitigate further fluctuation in tip fee
• FY 17 Disposal Fee
  – Tier 1 Long-term: $64 / ton
  – Tier 1 Short-term: $66 / ton
  – Tier 2: $68 / ton
  – Tier 3: $64 / ton
  – Tier 4: $67 / ton
Adopted tip fees from 2013 to 2017 reflects baseline (Tier 1 short-term) tip fee
The MIRA Advantage

- Uniform municipal pricing options.
  - No discrimination based on size or geography

- Base Tip fee equivalent to cost of service (as subsidized by Tip Fee Stabilization Fund).

- Firm long term Commitment to accept waste.

- $0 minimum recycling tip fee.

- Publicly owned
  - Significant municipal presence on MIRA’s Board of Directors.
  - CSWS operates on behalf of municipalities not shareholders.
• Need for capital improvements at PBF and WPF

• Changes in composition of waste

• New state strategy
  – Draft Comprehensive Materials Management Strategy released by DEEP.
Outlook

• DEEP Resource Rediscovery RFP
  – What is the right technology?
  – As per PA14-94, DEEP soliciting proposals for alternatives to current CSWS.
  – DEEP (with MIRA input) to select finalists.
  – MIRA to negotiate with DEEP-selected finalist to re-develop the South Meadows Site.
Outlook – Potential Changes

• New energy-conversion technology (PBF/EGF)?
  – Anaerobic digestion
  – Gasification
  – Production of other fuels

• Changes in extraction of materials (WPF)?
  – Organics
  – Multi-material separation

• Right-sizing infrastructure to evolving waste stream?
• MDC LITIGATION: $65 Million claim for unbilled costs brought in Sept 2009
  – MIRA prevailed overwhelmingly in recent Arbitration Panel decision.
  • MDC continues to litigate
  • Legal costs over $2 million
  • Hope to conclude this litigation by years end
• MIRA website:
  – [www.ctmira.org](http://www.ctmira.org)
• MIRA headquarters phone:
  – (860) 757-7700
• DEEP Resource Rediscovery RFP
The Honorable Donald S. Stein  
Chairman, MIRA's Board of Directors  
First Selectman, Town of Barkhamsted

Marilyn Cruz-Aponte  
Public Works Director,  
City of Hartford

Richard J. Barlow  
Vice Chairman, MIRA's Board of Directors

The Honorable Ralph F. Eno Jr.  
First Selectman, Town of Lyme

Scott Shanley  
Chair, MIRA's Finance Committee  
General Manager,  
Town of Manchester

Andrew J. Nunn  
Former Chief Administrative Officer,  
City of Bridgeport

John E. Adams  
Former First Selectman, Granby  
Chair, MIRA's Policy and Procurement Committee

Dr. Robert Painter  
Former Hartford City Council

The Honorable James M. Hayden  
Chair, MIRA's Organizational Synergy and Human Resources Committee  
First Selectman, Town of East Granby

Rep Patricia Widliz  
Former Representative
### CSWS Expenditure Classifications (adopted budget)

<table>
<thead>
<tr>
<th></th>
<th>FY14</th>
<th>FY15</th>
<th>FY16</th>
<th>FY17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trash to Energy Facility</td>
<td>$30,662,000</td>
<td>$31,153,100</td>
<td>$32,745,500</td>
<td>$33,514,696</td>
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<tr>
<td>Other Expenditures</td>
<td>$17,110,800</td>
<td>$16,313,400</td>
<td>$16,474,290</td>
<td>$15,865,737</td>
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<tr>
<td>Capital Contributions</td>
<td>$5,909,000</td>
<td>$7,425,000</td>
<td>$9,452,004</td>
<td>$10,320,705</td>
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<tr>
<td>Indirect Expenses</td>
<td>$10,520,200</td>
<td>$9,608,500</td>
<td>$9,530,596</td>
<td>$8,934,956</td>
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