Information Item:

Draft Facility Plan for Metropolitan Wastewater Treatment Plant Solids Processing Facility

Bill Cook, MCES Engineering Services Manager, Technical Services

Environment Committee: December 8, 2015

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Purpose

- Inform Environment Committee
  - Starting a public involvement/participation process
  - Develop messages that are aligned with Thrive
  - Report on exhaustive evaluations of technology options
- No action required

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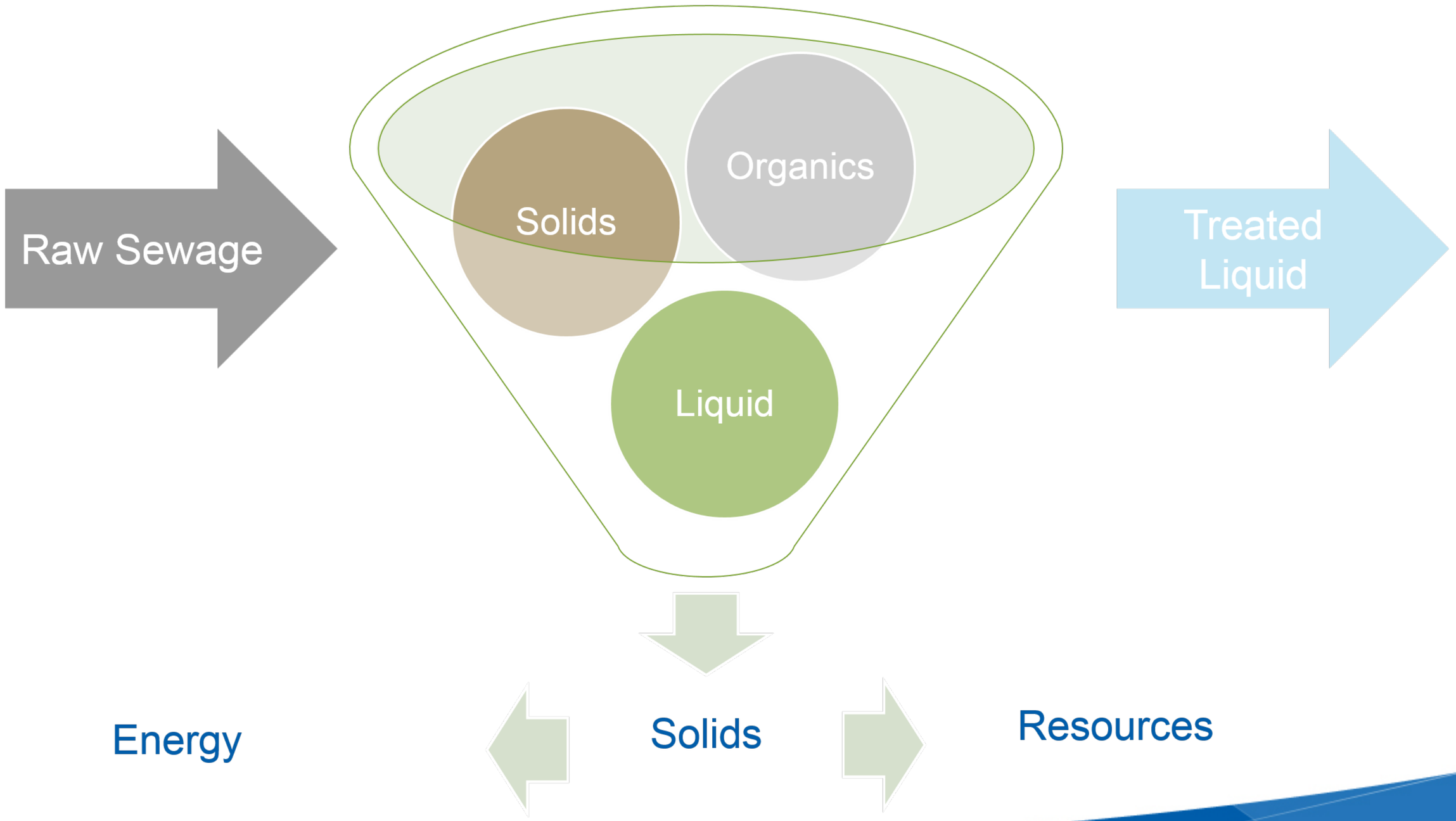
Value in our Wastewater



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Why do we need more capacity?

- Existing facility has a firm capacity of 240 dry tons per day (dtpd)
  - Currently operating at firm capacity and using standby capacity for peak loads
  - Back up capacity is landfilling which is not sustainable
  - Need to provide capacity for additional regional growth and to provide additional flexibility to other MCES Operations

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Solids Planning from a Thrive Perspective

- Stewardship -- Responsible management of the region’s finite resources
    - Rivers
    - Agriculture soils
    - Financial
    - Maximizing existing investments in infrastructure
- Prosperity
    - Foster economic competitiveness
    - Strategic private and public decisions
    - Encouraging redevelopment and infill
- Equity
    - Provide affordable service to everybody
- Livability
    - Minimize neighborhood disruption
- Sustainability
    - Climate change mitigation, adaption and resilience
    - Air quality
    - Surface water quality

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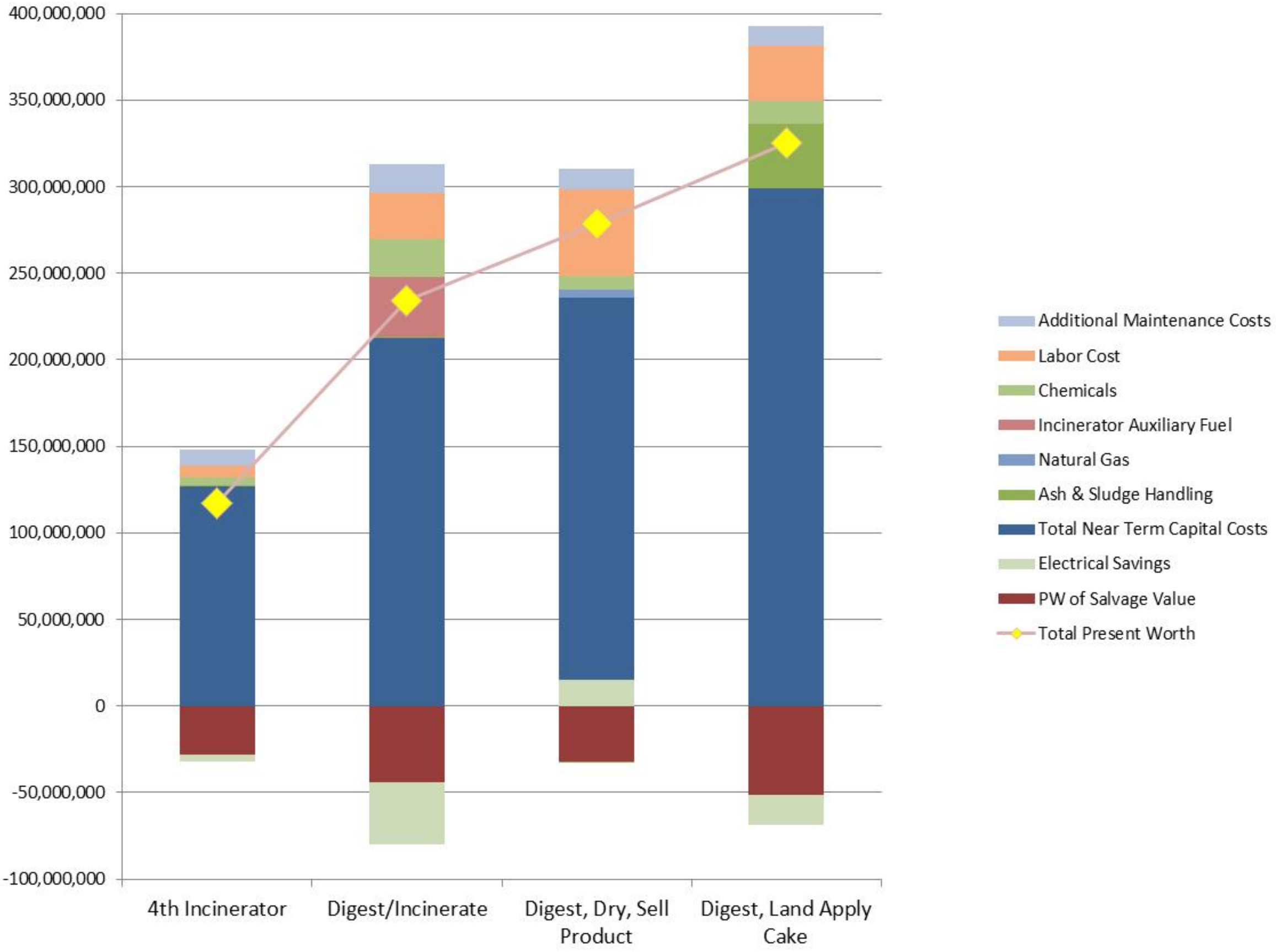
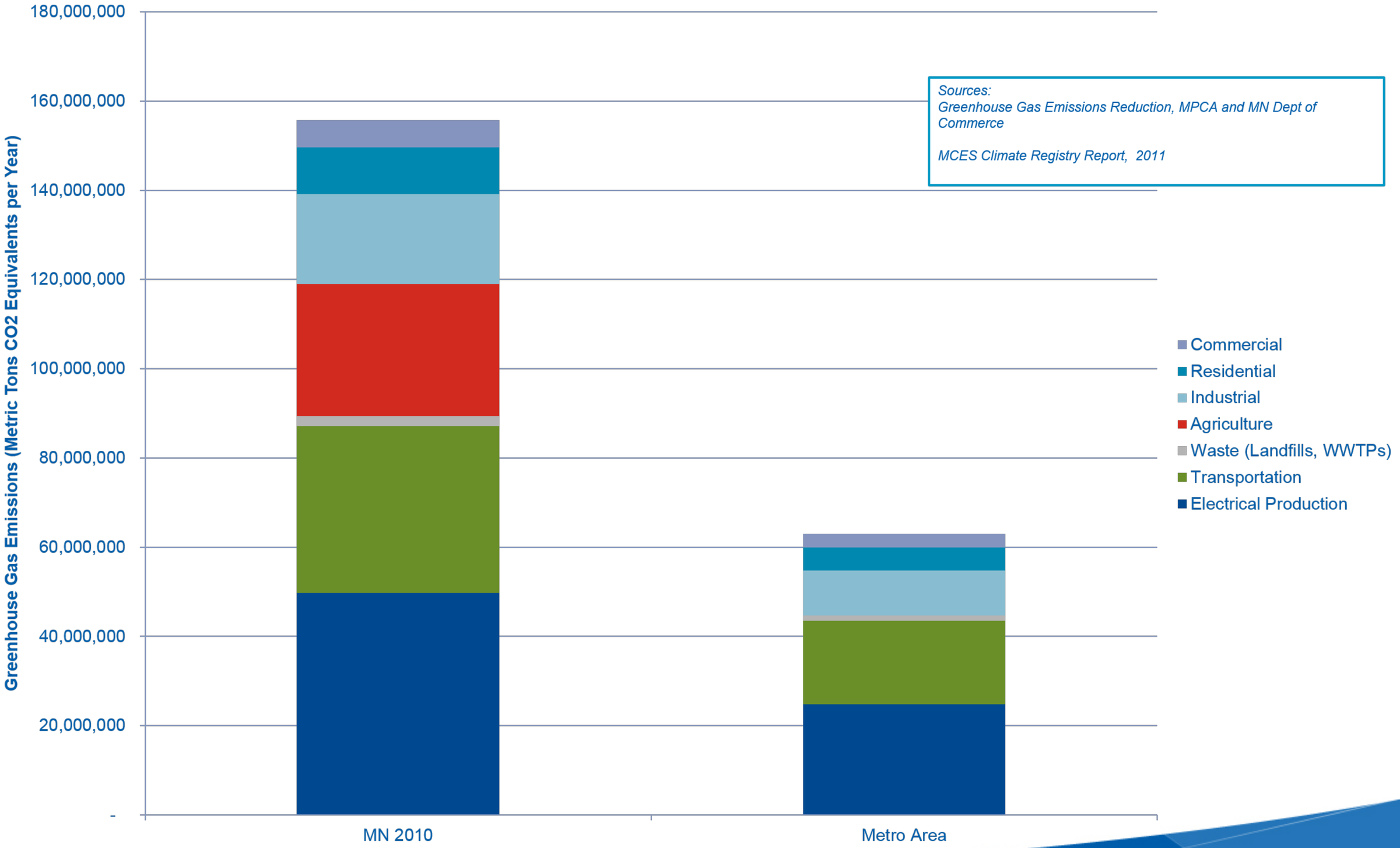
Alternatives

- Continue sustainable incineration and energy recovery
- Convert to anaerobic digestion and methane recovery
- Convert to land application of digested sludge
- Alkaline stabilize sludge and land apply

Stewardship and Prosperity



MCES Solids Impact on Greenhouse Gas Emissions



Sources:
Greenhouse Gas Emissions Reduction, MPCA and MN Dept of Commerce

MCES Climate Registry Report, 2011

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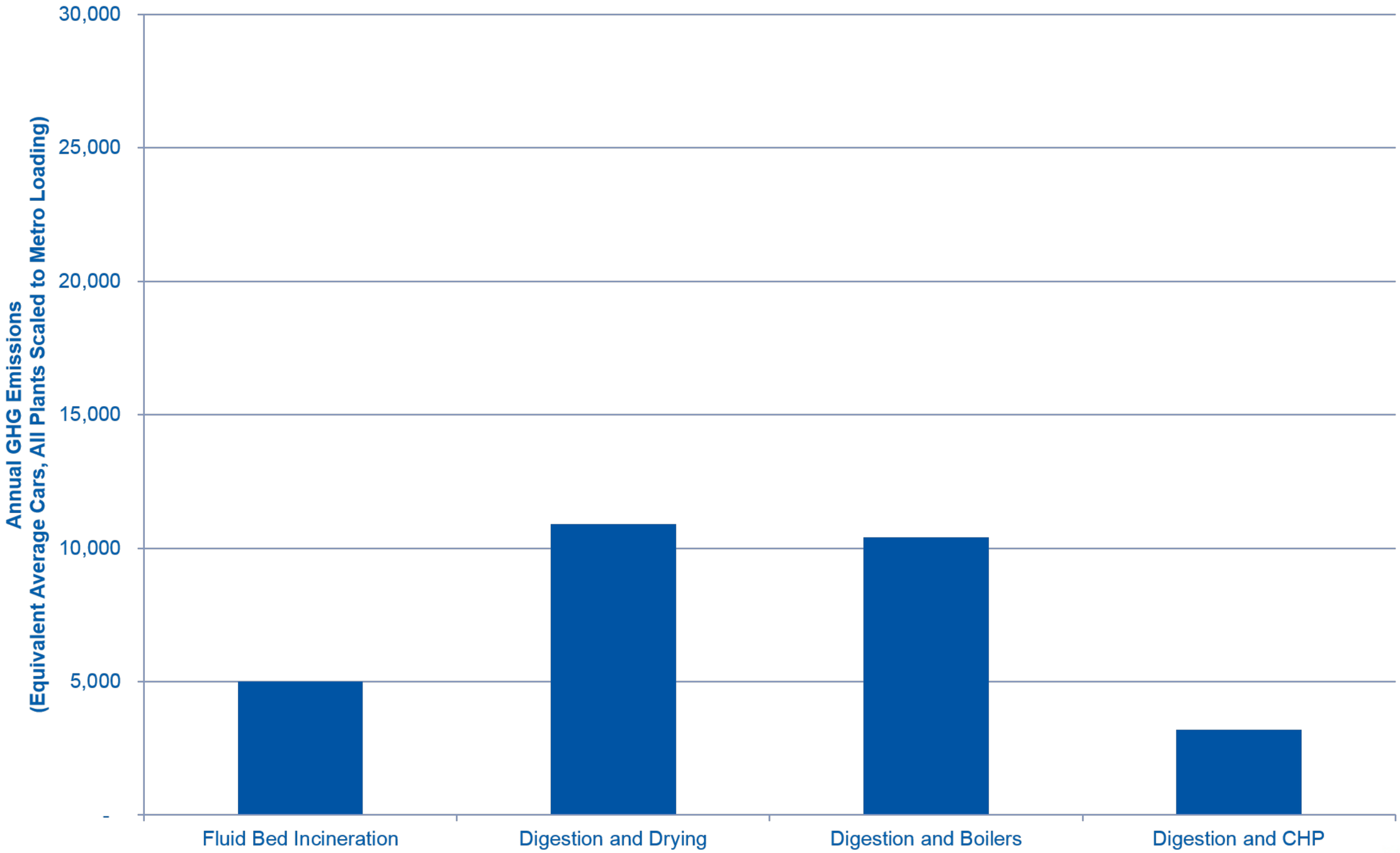
Greenhouse Gas Production by Technology



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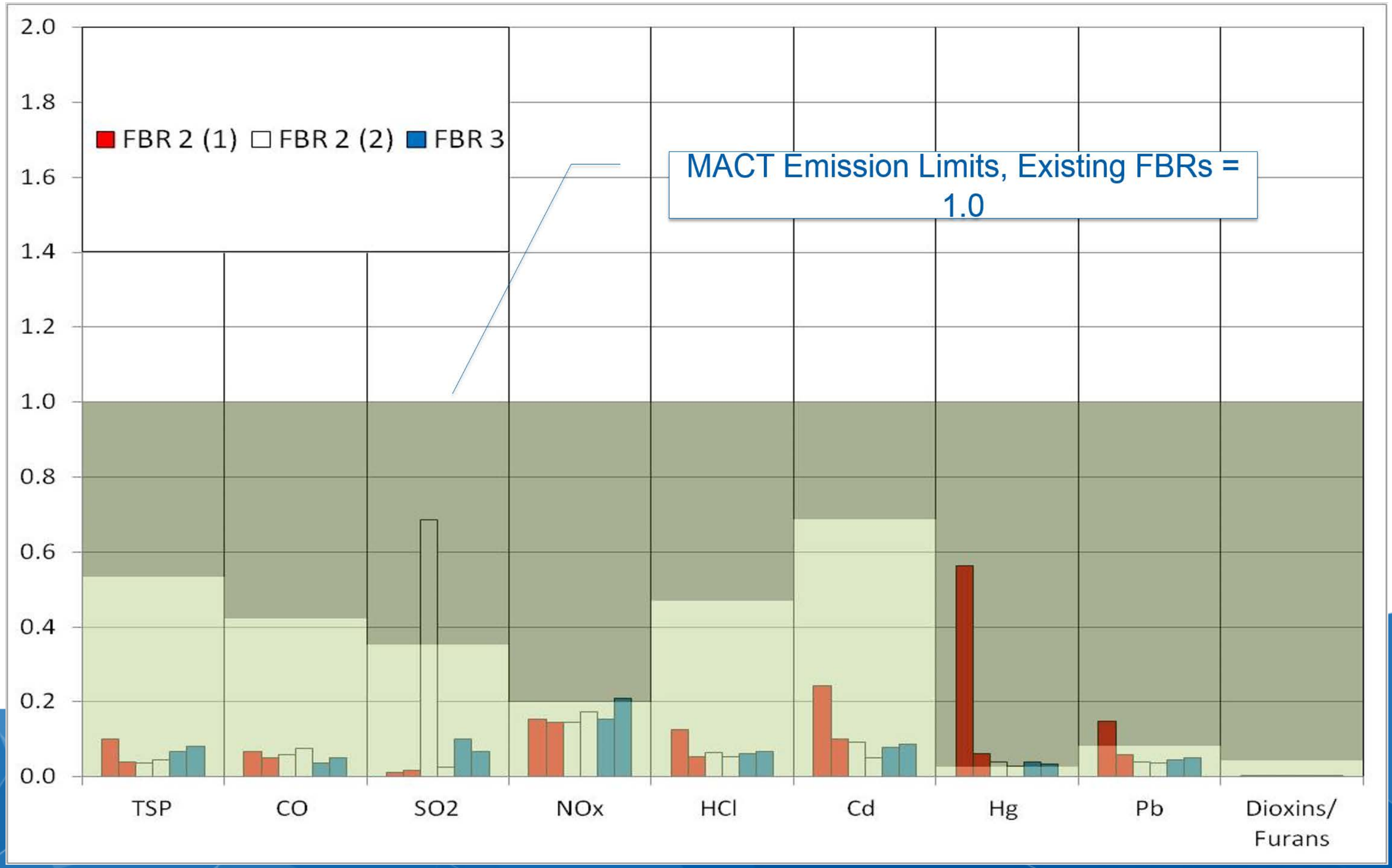
Maximum Achievable Control Technology (MACT) Results Show Sustainable Air Emissions

New Requirements for 2016



Livable Communities

- Recommended plan
  - Impact on traffic
  - Odors
  - Disruption and inconvenience

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Recovery Evaluation

- Energy from sludge
  - 2 megawatts annual average from incineration
- Phosphorus tecycle
  - Ash is 25% phosphorus (Metro is 10 dtpd phosphate)

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Evaluation of Alternatives

- Continue sustainable incineration and energy recovery
  - Promotes stewardship and prosperity
  - Enhances livable communities
  - Provide affordable service to all customers
  - Provides sustainable solutions
    - Energy recovery
    - Phosphorus recycle
    - Reduces greenhouse gases

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Path Forward

Metro Plant Solids Incineration Communications Process | PLANNING & PERMITTING PHASE

2014 Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
2015 Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
2016 Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

Design process begins in 2017

ESET PROJECT UPDATES/KEY MET COUNCIL MEMBERS
- Update 1
- Update 2
- Update 3

INTERNAL STAKEHOLDER MEETINGS
- Operations & Maintenance
- Local 35 & Other Represented Groups
- EQA
- Process Engineers

ENVIRONMENT COMMITTEE

MET COUNCIL/KEY MET COUNCIL MEMBERS

KEY STATE & CITY STAFF

Continues into design process

FACILITY PLAN
- Finalize Facility Plan
- Facility Plan Approval (Env Committee, Met Council)
- Submit Facility Plan & Draft EAW to MPCA

STAKEHOLDER OUTREACH
- Group A
- Group B
- Group C
- Group D
- Group E

PUBLIC HEARINGS
- Request and Notice of Public Hearing
- Hold Public Hearing

KEY CITY/STATE STAFF
- MPCA
- St. Paul Public Works Staff
- South St. Paul
- St. Paul City Council
- Ramsey County Staff

STAKEHOLDER GROUP DETAIL

Group A: Regulatory Agencies
Presentation/Q&A/Plant Tour
- DNR
- MN Department of Health
- US Army Corps of Engineers
- US Fish and Wildlife
- National Park Service
- MPCA

Group B: Neighborhood residents
- Dayton's Bluff
- Battle Creek
- West Side

Group C: Businesses on Childs Road

Group D: Other Stakeholders
Individual Meetings
- Friends of the Mississippi River
- Sierra Club North Star Chapter
- Clean Water Action
- Nat'l Park Conserv Association
- Audubon Society of St. Paul
- Minnesota Project
- MCEA
- IzaakWalton League
- Fresh Energy
- Great Plains
- Conservation Minnesota
- MN Environmental Partnership

Group E: Rate Payers

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ASSIGNEES: Cook, Clancy, Smith, Heflin, O'Donnell, Gagne, Pickart, Lantry, Richter

TASK PROGRESS: Planned, Ongoing discussions

Questions

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