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Chair Michael Dembrow and Members of Senate Environment & Natural Resources
Chair Ken Helm and Members of House Energy & Environment
February 7, 2018

Thank you for the opportunity to provide comments on HB 4001 and SB 1507. We support the legislature's work to reduce greenhouse gas emissions in the state. Covanta is a national leader in developing, owning and operating facilities that convert municipal solid waste ("MSW") into renewable energy (waste-to-energy) or "WTE" facilities). In Oregon, we operate the Marion WTE facility which turns the waste it processes into enough renewable energy to power the city of Woodburn.

We are concerned that the current bills as drafted would exempt landfills from cap and trade obligations and include WTE facilities. The Marion WTE facility would have to purchase allowances while landfills face no obligation for their methane emissions. This would penalize communities that send their waste to a WTE facility instead of to a landfill.

The GHG benefits of WTE relative to landfilling are well recognized, including by CalRecycle, [i] CARB,[ii] the Center for American Progress,[iii] Third Way, [iv] a 2016 report from the Berkeley Law Center for Law, Energy & the Environment,[v] U.S. EPA,[vi] U.S. EPA scientists,[vii] the Intergovernmental Panel on Climate Change ("IPCC"),[viii] the World Economic Forum,[ix] and the European Union.[x,xi]

The recognition given to WTE is based on diverting solid waste from landfills where it would have emitted methane for decades, even when factoring in landfill gas collection, generating energy that otherwise would likely be generated by fossil-fueled facilities; and recovering metals for recycling, thereby saving the GHGs and energy associated with the production of products and materials from virgin inputs.

WTE's climate benefits are even more striking in light of methane's role as a short-lived climate pollutant ("SLCP"). New data show that the methane emitted by landfills and other sources is even more damaging than previously thought. Methane is the second largest contributor to global climate change.[xii]

Finally, WTE facilities have been exempted from other cap and trade programs in the Regional Greenhouse Gas Initiative (RGGI) in the Northeastern United States, the European Union Emissions Trading Scheme and the Ontario cap and trade program. In California, WTE has received full allowances in the cap and trade program since the beginning of the program and it is expected that this treatment will continue. Further, WTE can generate carbon offset credits

under the Kyoto Protocol's Clean Development Mechanism and the Verified Carbon Standard. Two U.S. WTE facilities, eligible due to their recent expansion, have sold carbon offset credits into the voluntary market. WTE was also eligible to generate emission rate credits under the U.S. EPA's Clean Power Plan.

Thank you very much for the opportunity to comment. Please let us know if you have any additional questions and thank you for your work on this important issue.

CalRecycle (2012) CalRecycle Review of Waste-to-Energy and Avoided Landfill Methane Emissions. http://www.calrecycle.ca.gov/Actions/PublicNoticeDetail.aspx?id=735&aiid=689

[ii] See Table 5 of California Air Resources Board (2014) *Proposed First Update to the Climate Change Scoping Plan: Building on the Framework, Appendix C – Focus Group Working Papers, Municipal Solid Waste Thermal Technologies*

[iii] Center for American Progress (2013) Energy from Waste Can Help Curb Greenhouse Gas Emissions http://www.americanprogress.org/wp-content/uploads/2013/04/EnergyFromWaste-PDF1.pdf

[iv] Third Way (2014) *Power Book*: *Energy from Waste*, http://powerbook.thirdway.org/filter-web-app/energy-from-waste, accessed November 26, 2014.

[v] Berkeley Law Center for Law, Energy & the Environment (2016) *Wasting Opportunities: How to Secure Environmental & Clean Energy Benefits from Municipal Solid Waste Energy Recovery*. https://www.law.berkeley.edu/research/clee/research/climate/waste-to-energy/

[vi] U.S. EPA Office of Solid Waste, Energy Recovery from the Combustion of Municipal Solid Waste (MSW), https://www.epa.gov/smm/energy-recovery-combustion-municipal-solid-waste-msw#EnergyRecovery, accessed January 20, 2017.

[vii] Kaplan, P.O, J. DeCarolis, and S. Thorneloe (2009) Is it better to burn or bury waste for clean electricity generation? Environ. Sci. Technology 43 (6) pp1711-1717. http://pubs.acs.org/doi/abs/10.1021/es802395e

[viii] EfW identified as a "key mitigation measure" in IPCC, "Climate Change 2007: Synthesis Report. Contribution of Work Groups I, II, and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change" [Core Writing Team, Pachauri, R.K and Reisinger, A. (eds.)]. IPCC, Geneva, Switzerland, 104 pp. http://www.ipcc.ch/publications_and_data/publications_ipcc_fourth_assessment_report_synthesis_report.htm

[ix] EfW identified as a key technology for a future low carbon energy system in World Economic Forum. *Green Investing: Towards a Clean Energy Infrastructure.* January 2009. Available at: http://www.weforum.org/pdf/climate/Green.pdf

[x] EU policies promoting EfW as part of an integrated waste management strategy have been an overwhelming success, reducing GHG emissions over 72 million metric tonnes per year, see European Environment Agency, *Greenhouse gas emission trends and projections in Europe 2009: Tracking progress towards Kyoto targets http://www.eea.europa.eu/publications/eea_report_2009_9*

[xi] European Environmental Agency (2008) Better management of municipal waste will reduce greenhouse gas emissions. Available at: http://www.eea.europa.eu/publications/briefing_2008_1/EN_Briefing_01-2008.pdf

[xii] See Figure SPM.5 of IPCC (2013) *Summary for Policymakers*. In: *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Stocker, T.F., *et al.* (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA https://www.ipcc.ch/pdf/assessment-report/ar5/wg1/WG1AR5_SPM_FINAL.pdf