Business Viewpoints: Emerging trends in solid waste

### Alternative fuel vehicles solid
- Solid waste-led Compressed Natural Gas (CNG) is the next evolution in eco-friendly vehicles (EV)
- EVs are expected to overtake CNG if cost can be more competitive than CNG and Diesel

### Advances in technology will change the industry
- A digital connection to all stakeholders has become a minimum requirement
- New technology/AI has been increasingly used to replace low skilled/repetitive tasks to help with labor pool constraints

#### Technology may automate more collection, drive dynamic routing, and pick-up on demand

While above average pace of M&A persists with lots of tuck-ins and some new market entries for the consolidators, eventually some consolidation, at the top, is likely

The U.S. has allocated $10B for per-and polyfluoroalkyl substances (PFAS) action²
Many countries are adopting or changing regulatory requirements related to PFAS

### Solid waste generation has gradually increased over time to ~5 pounds/person³ with growing use of single-use products coupled with population growth, and is expected to continue to increase in the years ahead

Extended Producer Responsibility (EPR) programs
- Several states including CT, OR, and ME have implemented their own legislations, with 13 states expected to be under consideration in 2022

Landfill Gas to Energy (LFGTE)/Organics
- Convert legacy high-volume sites and new high-volume sites to Hi-Btu facilities that produce renewable natural gas

Recycling business model
- Major industry players are moving away from commodity-driven business models and toward a processing fee model, prompted by China’s National Sword in 2018⁴

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1. Bloomberg Feb 26, 2021
3. epa.gov
4. China’s policy that has banned the importation of certain types of solid waste, as well as set strict contamination limits on recyclable materials

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