Congreso Internacional Bioenergía

Enabling Biomethane Growth in Spain: Digestate Optimization & Social Acceptance

FACTS Today:

Spain's biomethane challenge: digestate management and social acceptance remain the main barriers to permitting and project deployment.

Conventional wet AD limitations: high liquid digestate volumes increase logistics, storage, transport, and environmental compliance costs.

ARCIPLUG Plug-flow dry digestion advantages (HS-AD):

- Stable operation with feedstocks up to 40% solids **without dilution water.**
- **Improved digestate quality:** higher dry matter content, lower production volume, lower odor emissions, and easier handling & transport.
- **Digestate valorization pathways:** composting, co-processing with green waste, and production of standardized biofertilizers or soil amendments.
- **Higher social acceptance.**

Strategic impact: HS-AD positions biomethane projects as circular bioeconomy platforms combining renewable energy, waste valorization, and sustainable agriculture.

Regulatory alignment: supports Spain's stricter requirements on traceability, environmental impact, and nutrient management.

Permitting facilitation: simplified digestate logistics and lower environmental footprint reduce project development risks.

Proven international references:

INDIA → Haryana with paddy/rice straw and cow manure: 105 tons per day.

CHINA → Liaoning with dry cow manure: 360 tons/day.

ITALY → Calimera with SSO: 54.5 tons/day.

More information: https://arciplug.com/