

III Ciclo de 20 MasterClass

AGUASRESIDUALES.INFO

MASTERCLASS 13



“Experiencias y buenas prácticas en la operación de la hidrólisis térmica”

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Ciclo de 20
MasterClass
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Patrocinada por:



Eficiencia y sostenibilidad



Suministrar una alternativa de energía a medio billón de personas



Suministrar mas de 10 veces la capacidad de desalación actual



Cubrir el 10% mundial del uso de fertilizantes

La dura realidad

¿Sabías que el **50%** de las aguas residuales del mundo se vierten **sin tratar**

y

que las empresas del sector del agua son responsables del **4% del consumo energético global** según la Agencia Internacional de la Energía (IEA)?



Tendencias Macro



Urbanización



Regulaciones



Economía circular



Inversión

Gestión de fangos

CAMBI

El tratamiento de los lodos
típicamente representa...

50%

...de los costes de
operación de una EDAR

Raising a stink

Mount Hope residents petitioning to stop use of biosolids fertilizer on fields near their homes

By Ginger Grantham News Editor

Aug 28, 2008



1

Special Reports

Some complain about odor from sewage sludge spread on farmland

By: Greg Suskin

Posted: Aug 03, 2012 03:30 PM EDT

Updated: Aug 03, 2012 03:30 PM EDT



Sewage sludge upsets residents

Surprise! Sludge treatment plant developers withdraw plans, at least for now

Posted Sep 20, 2019

11



68 shares

By [John Best](#) | [lehighvalleylive.com contributor](#)

In a last-minute surprising move, representatives for a proposed sewage sludge treatment plant withdrew their land development plans.

Synagro Technologies Inc. withdrew the plans after a member of the Plainfield Township Board of Supervisors made a motion to reject them.

Millstone prepares to fight use of sludge as fertilizer

Press Freehold Bureau

MILLSTONE TOWNSHIP — Residents opposed to the use of sludge on a farm on Charleston Spring Road will seek state support to prevent the practice from continuing.

About 80 residents met at the Clarksburg Community Center to discuss possible plans of action to prevent the the state Department of Environmental Protection from allowing the use of sewage sludge as fertilizer on the Giffone Farm. The farm is owned by Anthony Har...

Muhler, R-Monmouth, attended the meeting and answered residents inquiries. She said, "I would not like to see any further progress on the site until we get some more answers."

Mrs. Muhler added, "We have to find alternatives that will satisfy all of us. Solutions are going to be expensive."

She stressed that a focused coherent approach to this issue would get the problem solved.

\$4.7 million dollars, based on a per gallon rate, according to Loscalzo. Loscalzo said that if the DEP insists on dumping sludge on the open areas that are left, there will be no more open areas to enjoy.

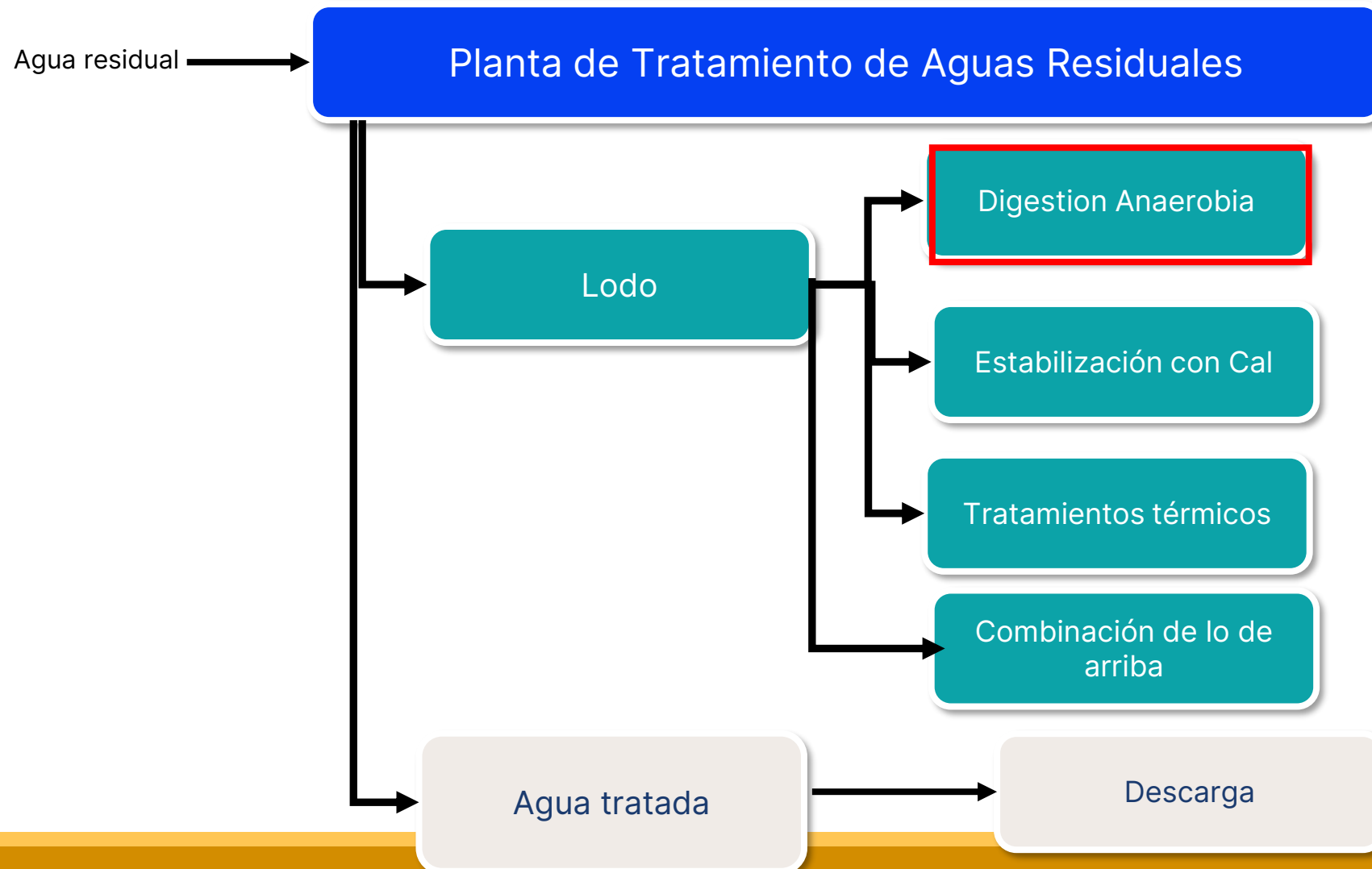
Jeannie Jarmus, Englishtown, said to the founders of S.M.E.L. Assemblywoman Muhler, "I challenge this an...

Plant odor fouls the air

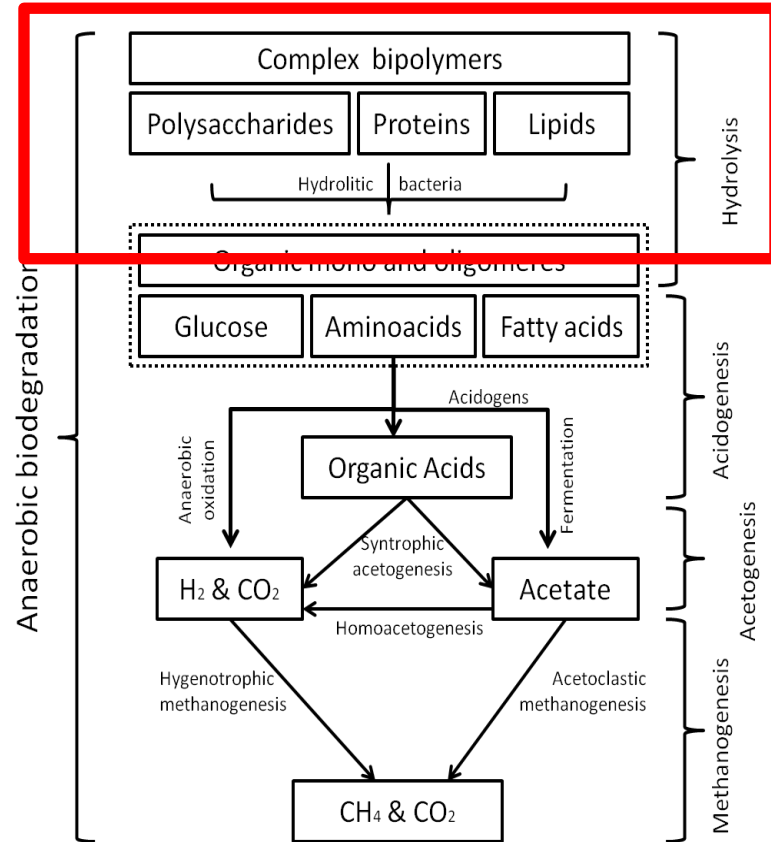
Residents and author...

SS
or:

Tratamiento de lodos

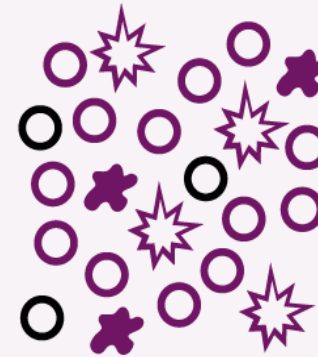


¿Por qué hidrólisis?

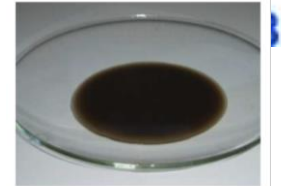


Untreated WAS, 5% DS

RAW SLUDGE

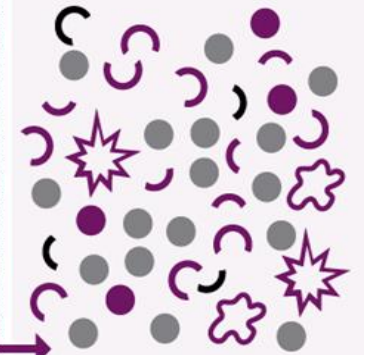


- Living bacteria
- Dead bacteria
- Inert suspended solids (SS)
- EPS



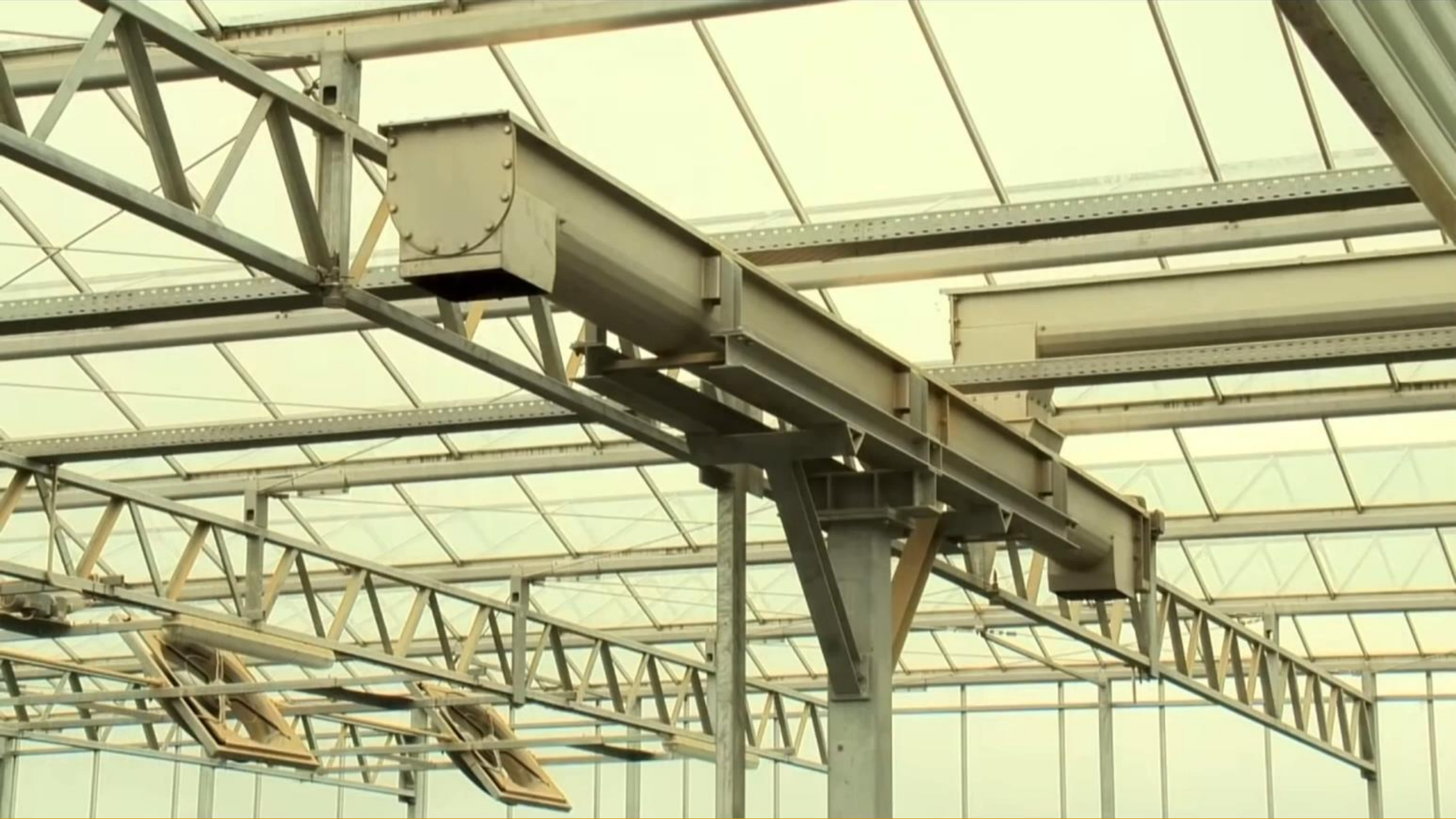
THP-treated WAS, 5% DS

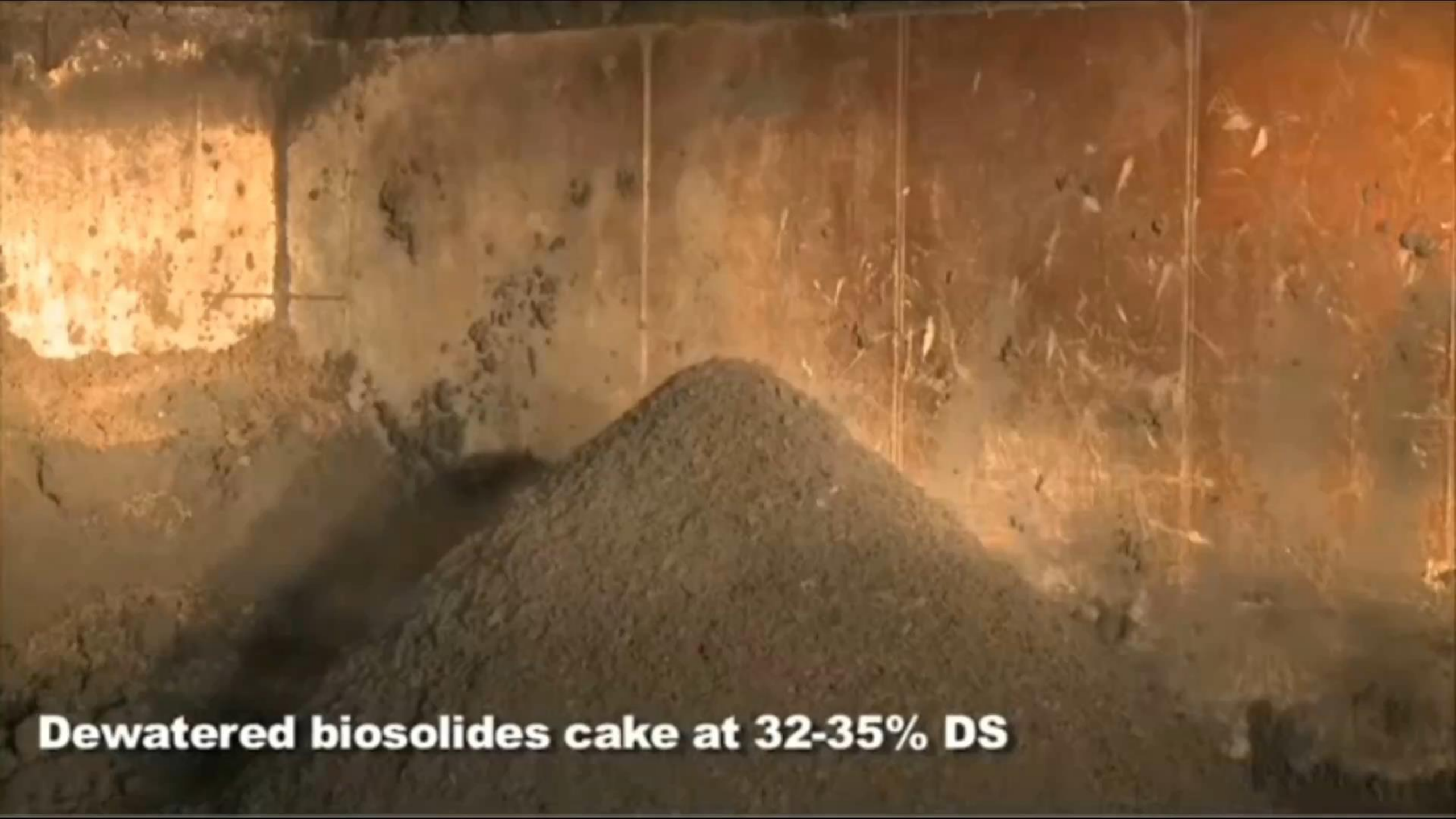
HYDROLYZED SLUDGE



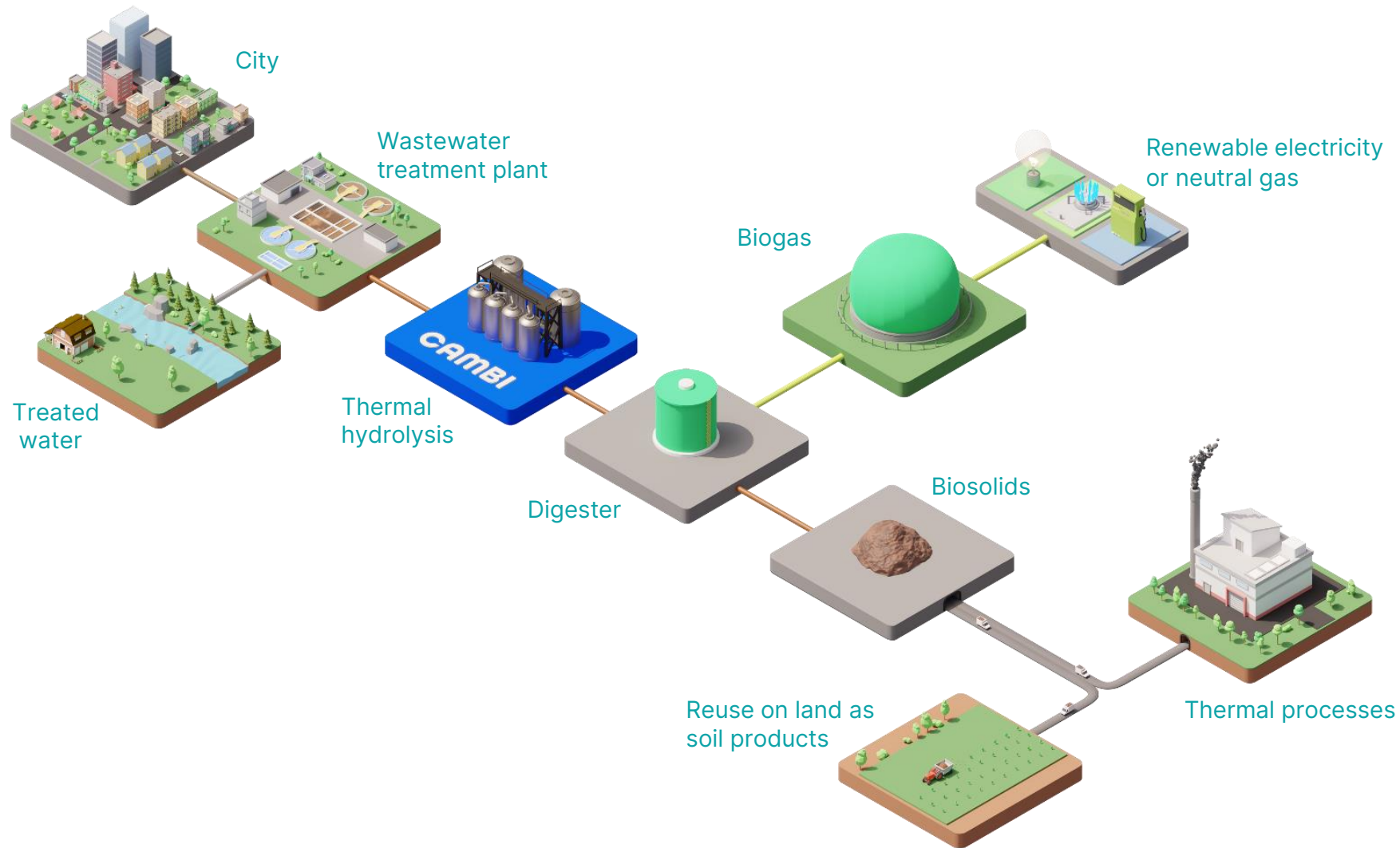
- Hydrolyzed SS
- Cell content
- Cell wall
- Inert suspended solids (SS)
- Hydrolyzed EPS







Dewatered biosolides cake at 32-35% DS



Beneficios de la hidrólisis térmica

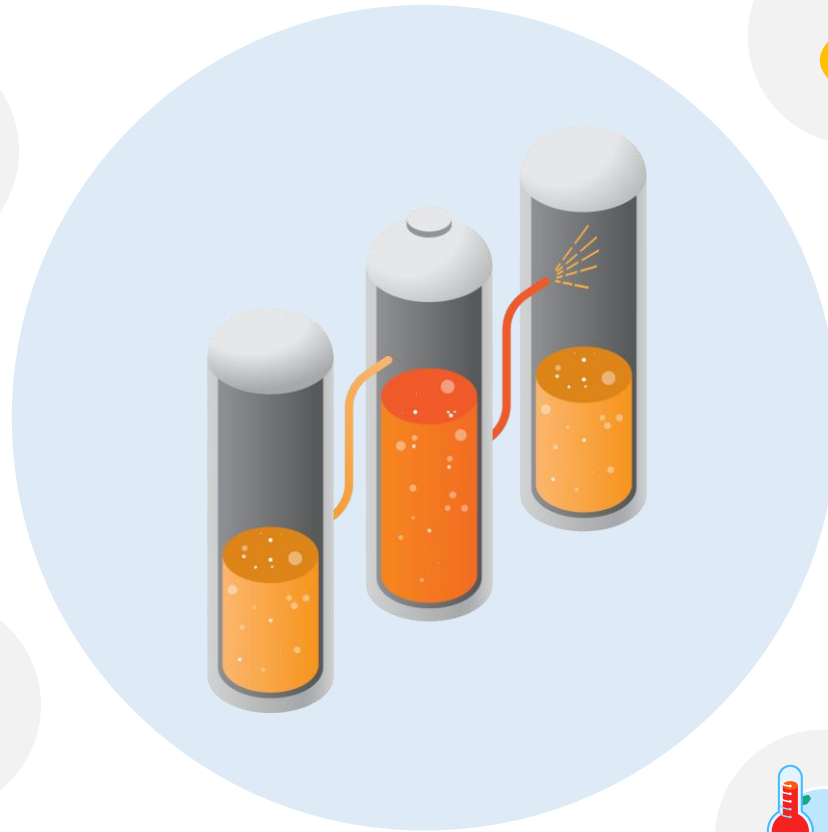
Markets with high construction costs and space limitations



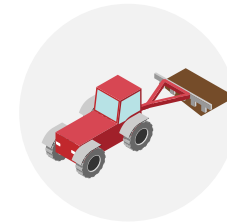
Municipalities with high cost of sludge disposal



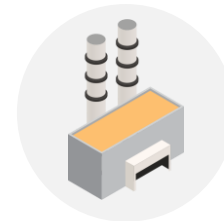
Projects where cities can establish a regional solids treatment center



Where eliminating risk of pathogen regrowth and an odour-free biosolids product is important



When customers need high-quality biosolids



In front of thermal systems, for increased efficiency



For customers who want to cut greenhouse gas emissions (aim to reach net zero)

Fiabilidad

Beneficios



Reducción de biosólidos hasta el 50%



Alta Calidad del biosólido (Clase A o B)*



Incremento de biogás de hasta el 50%



Mayor carga en digestores 3x



Baja huella de carbono



Mejor deshidratación

Impacto económico



Impacto medioambiental



Presencia Global

92

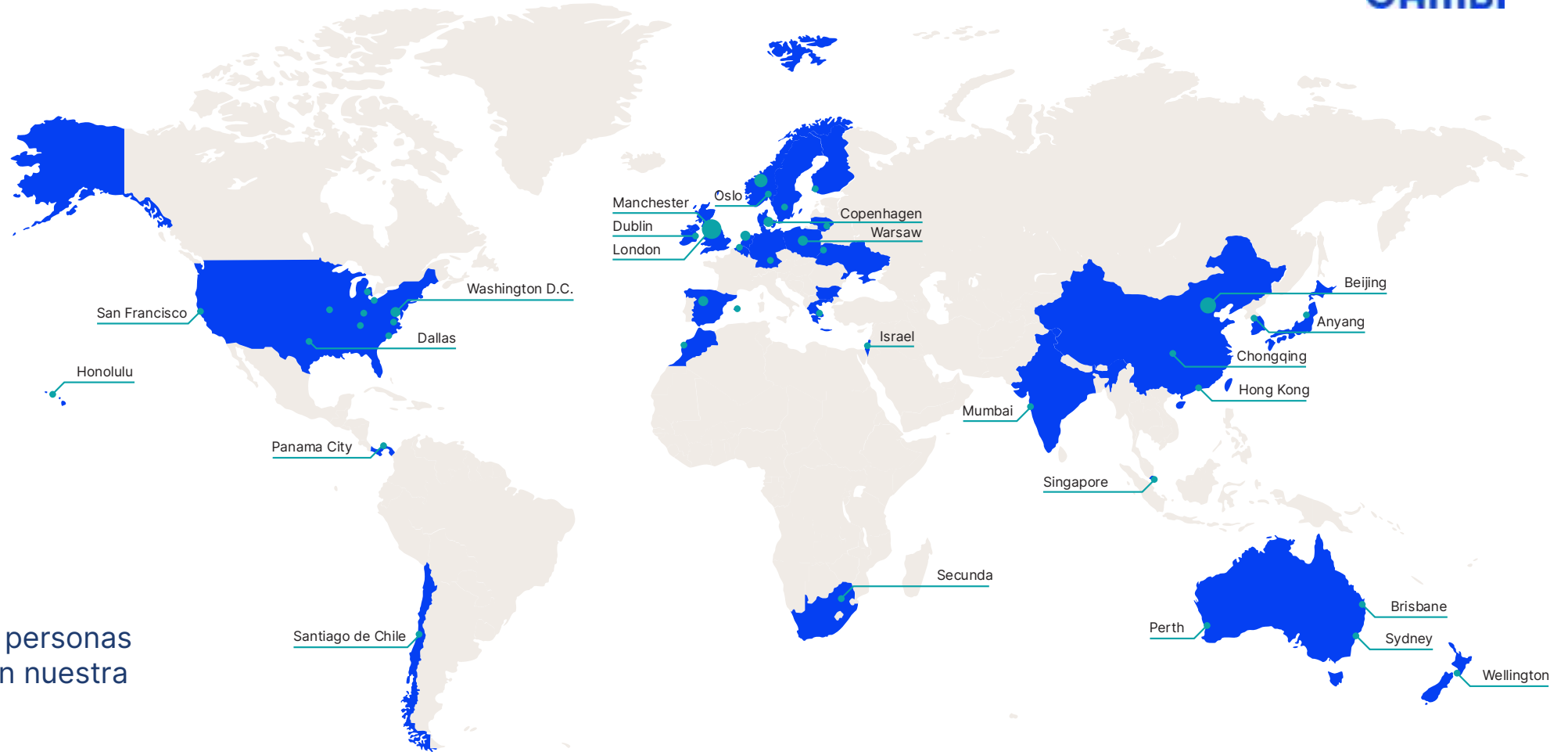
referencias

28

países

121

millones de personas
servidas con nuestra
tecnología



Para todo tipo de tamaños de plantas

S

B2



M/L

B4
B6



(X)XL

B12



**Población
servida**

50 - 250 miles



250 miles – 1 millón



Varios millones

B2



Planta B2 en Kenneth W. Hotz WWTP, Medina, Ohio



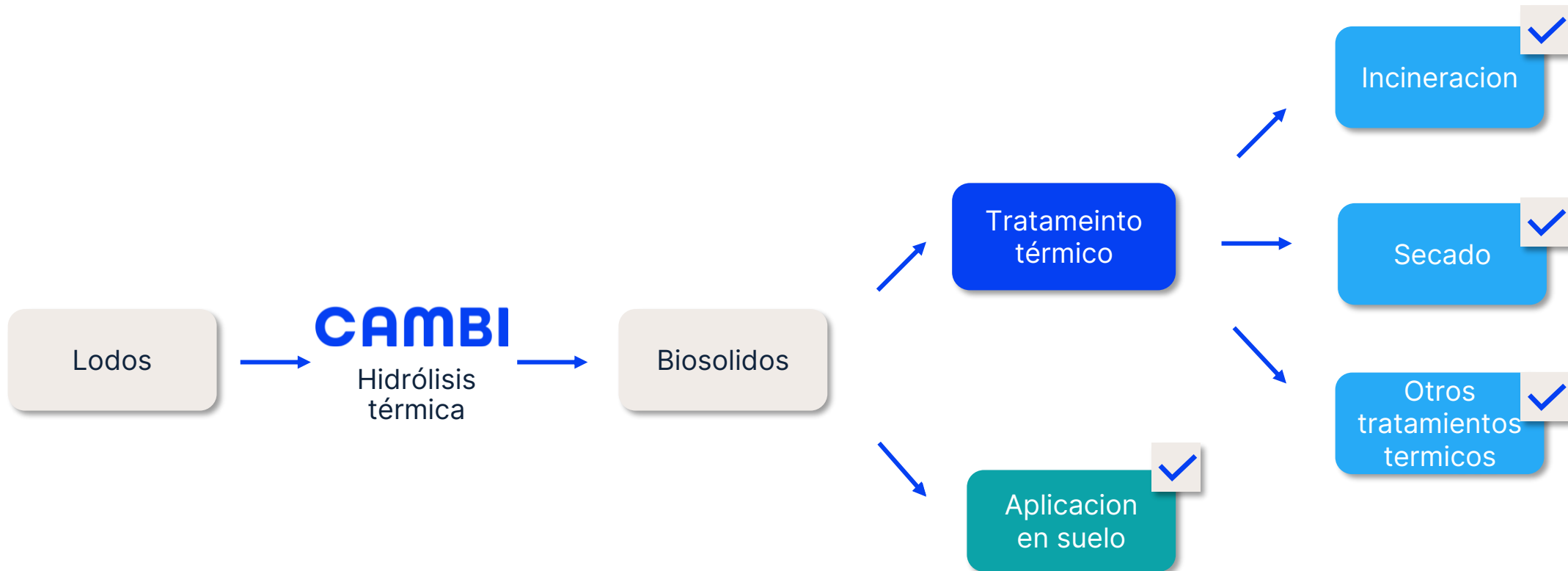
B6



Diseño modular para una construcción más fácil y eficiente

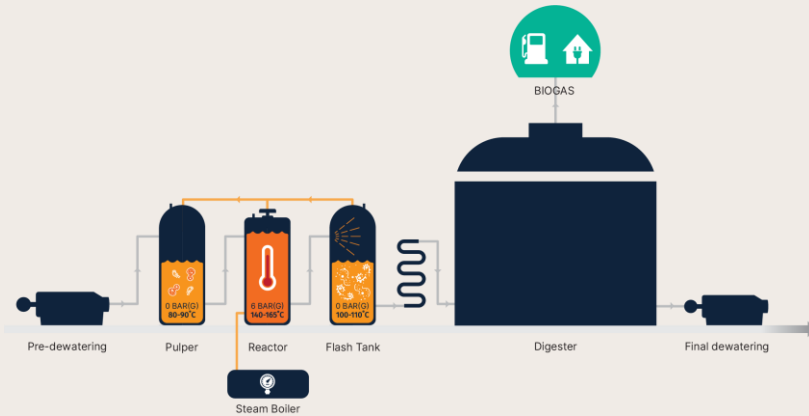


La hidrólisis juega un papel importante en todas las opciones en la gestión de lodos

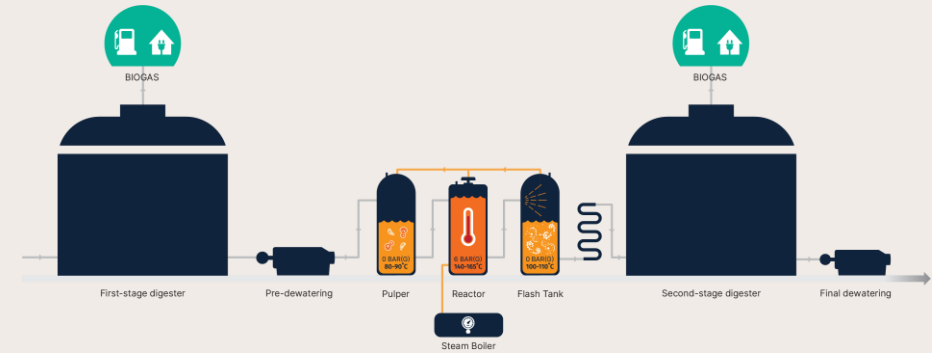


Traje a medida en cada proyecto

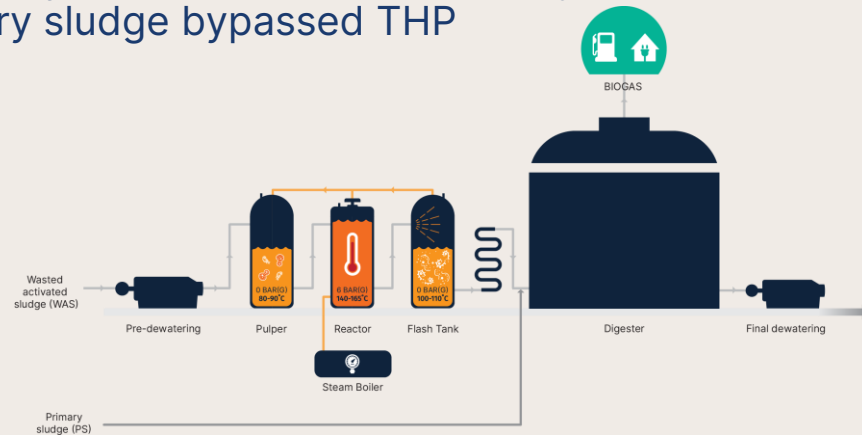
Full THP – Pre-AD THP



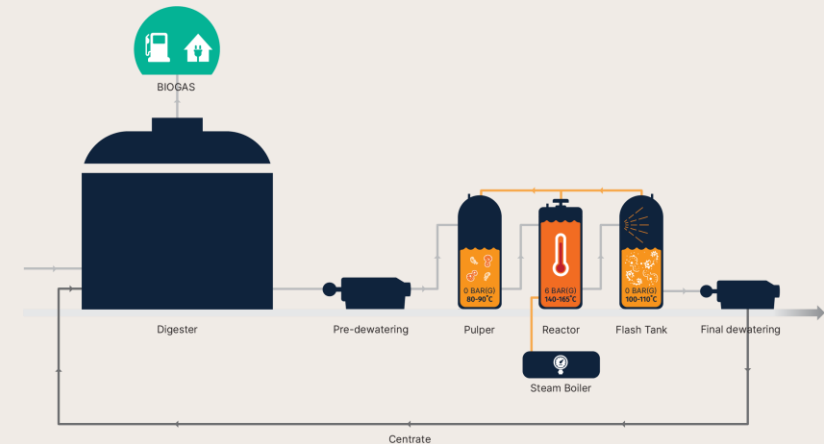
I -THP – Intermediate THP between 2 step AD



WAS only – Pre-AD THP of WAS only Primary sludge bypassed THP

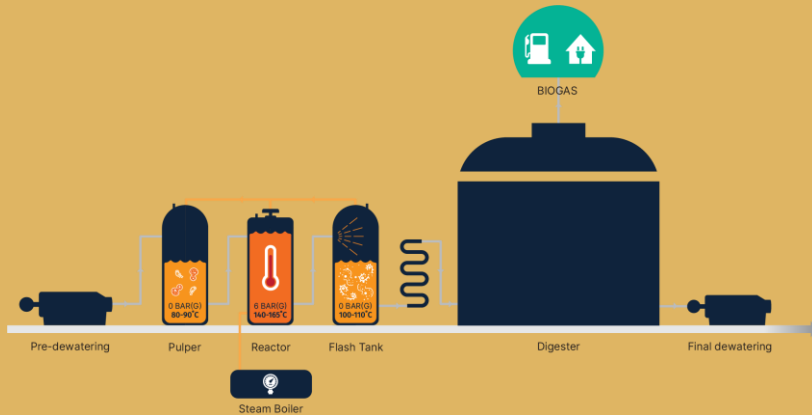


SolidStream – Post-AD THP

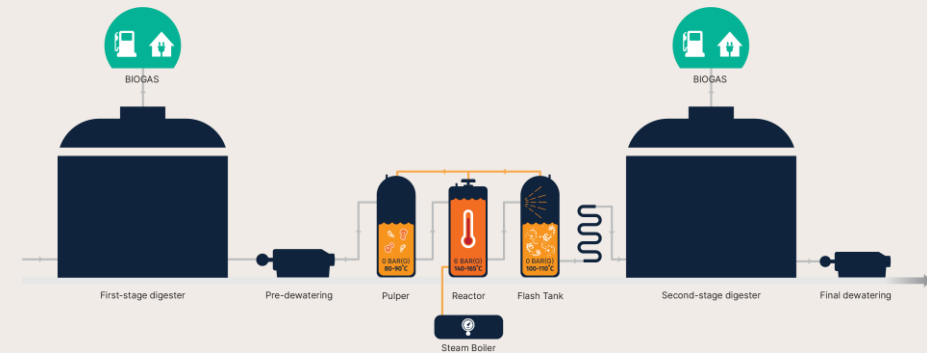


Traje a medida en cada proyecto

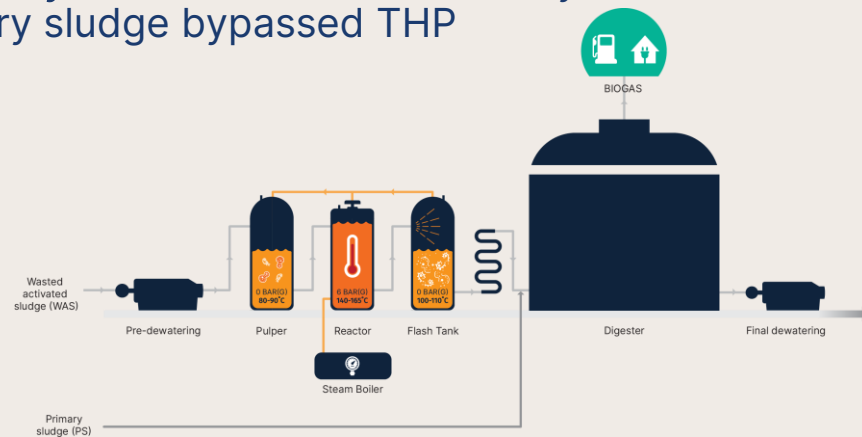
Full THP – Pre-AD THP



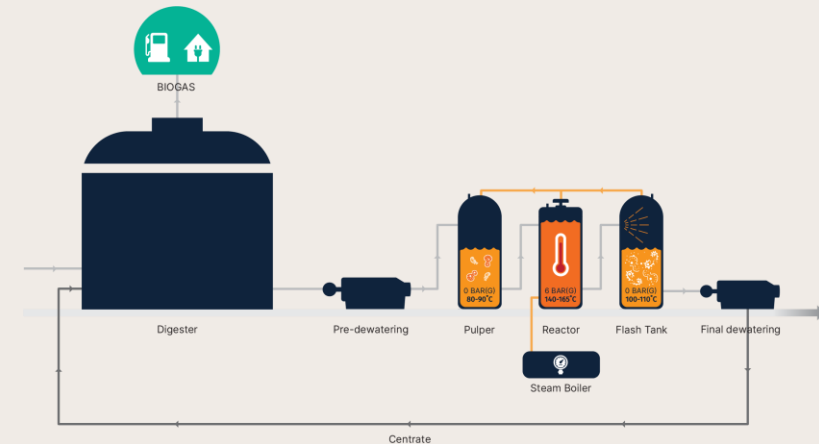
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WAS only – Pre-AD THP of WAS only Primary sludge bypassed THP



SolidStream – Post-AD THP



Planta de Blue Plains (Washington DC)



Planta de Blue Plains (Washington DC)

174 000 m³ diseño inicial

58 100 m³ ejecutado con CAMBI

NEW SOLUTION

CANCELLED TRADITIONAL DESIGN

CAMBI PROCESS

DISEÑO INICIAL CON DIGESTION CONVENCIONAL

SOLUCION CON CAMBI

Excelente calidad del producto final

ANTES de HT



DESPUES de HT



Source: DC Water's resource recycling business enabled by Cambi THP at the Blue Plains WWTP near Washington, DC
The smaller pictures above are from Slupsk and Bydgoszcz, respectively

Menor coste de disposición

30-60% menos volumen

- Mayor eliminación de materia orgánica
- Mejor deshidratación

Mayor calidad del lodo

- La mayor calidad de los biosólidos puede reducir el coste por tonelada y en algunos casos convertirlo en un producto



Olvídate de las quejas por malos olores

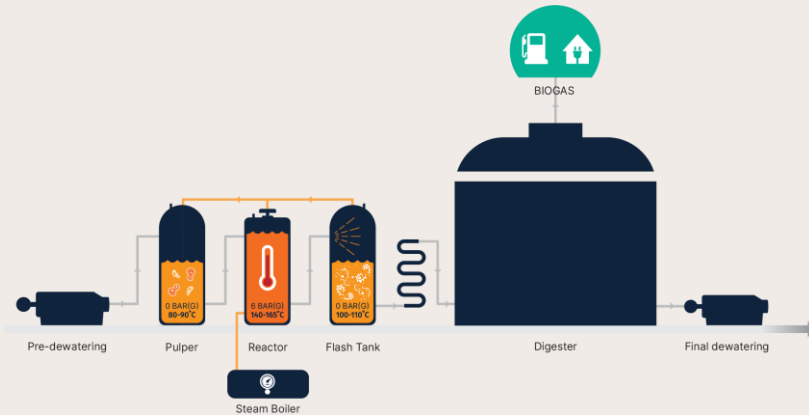


**Biosólido con olor a tierra y
seguro para su gestión**

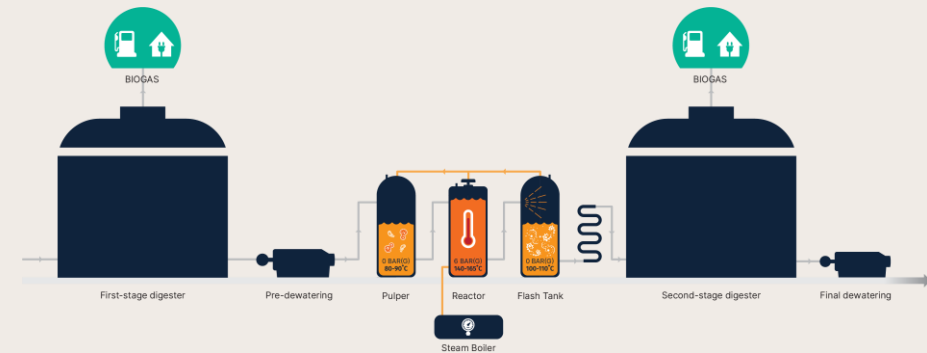


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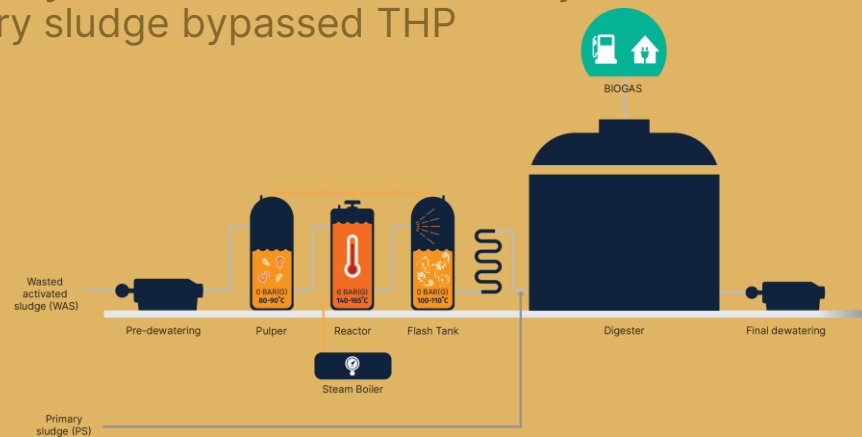
Full THP – Pre-AD THP



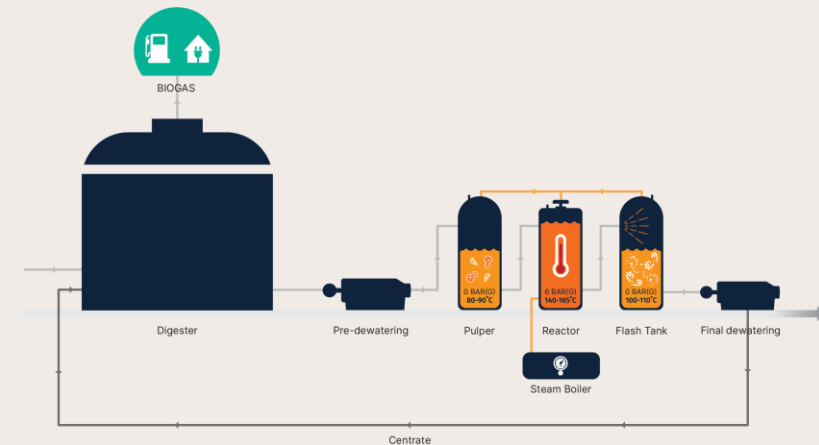
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SolidStream – Post-AD THP



Psytallia, Akto
42 ton f. biológico/d



55% VSR: 31% MS sequedad

WAS Only - Psyttalia

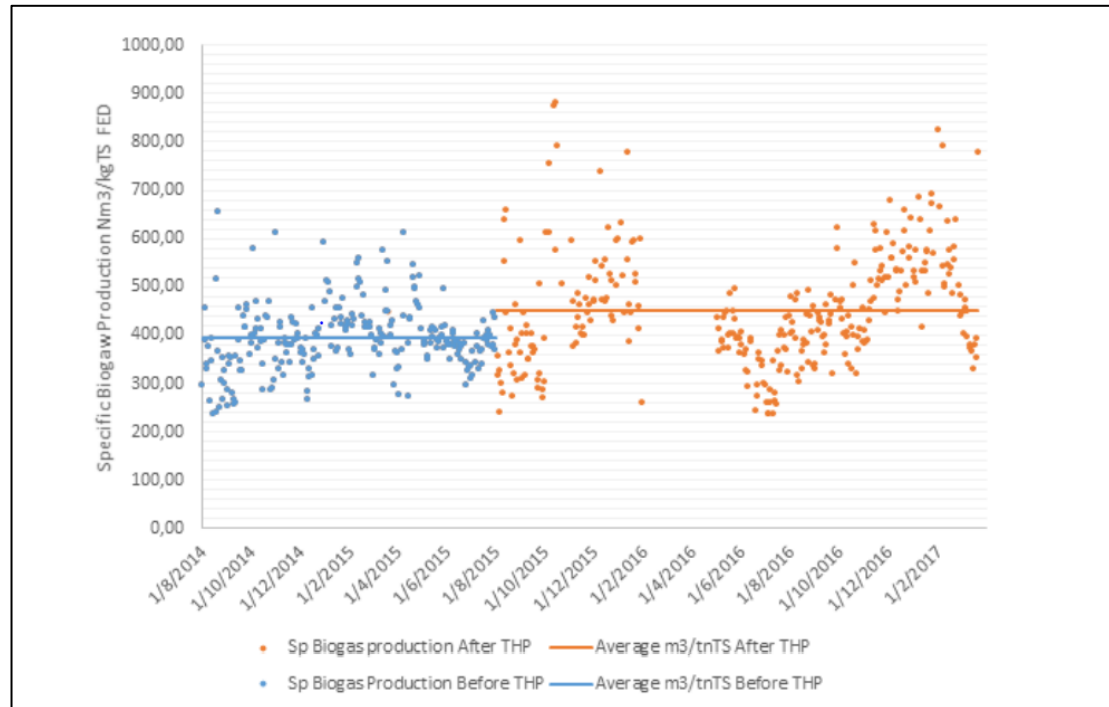
WAS

Psyttalia
Athens, Greece

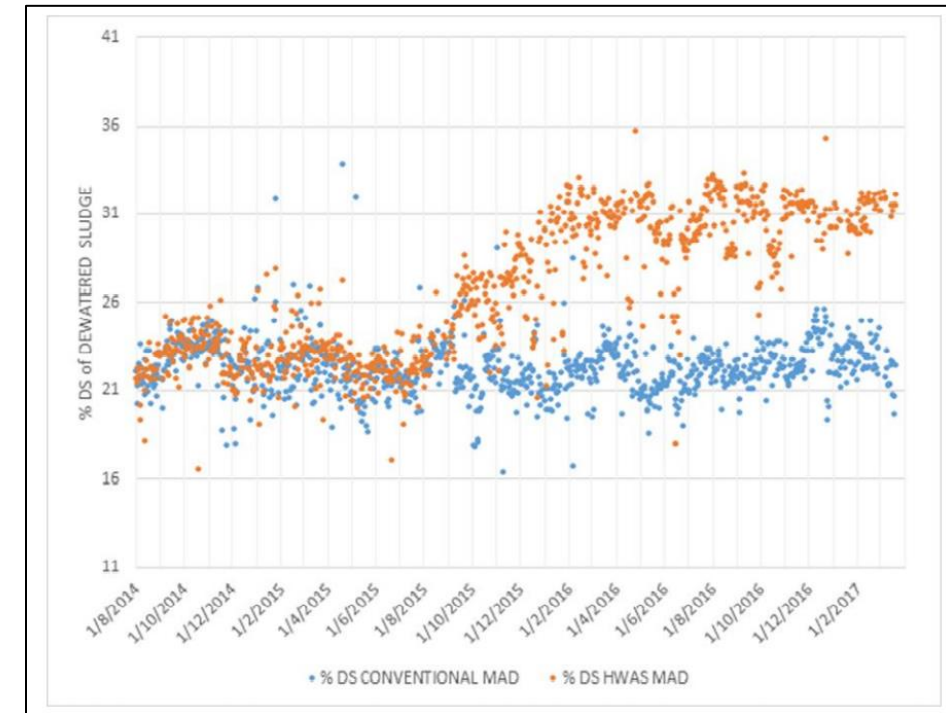


WAS Only - Psyttalia

Biogás

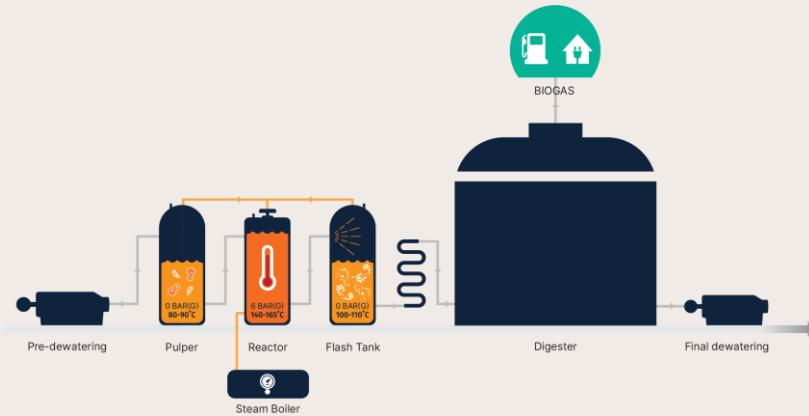


Sequedad final

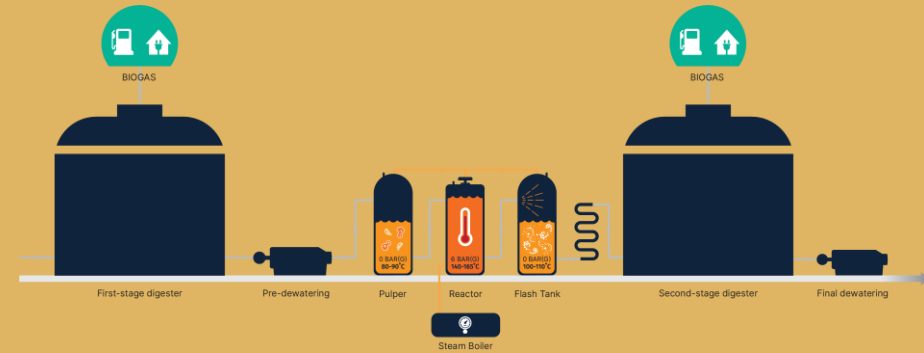


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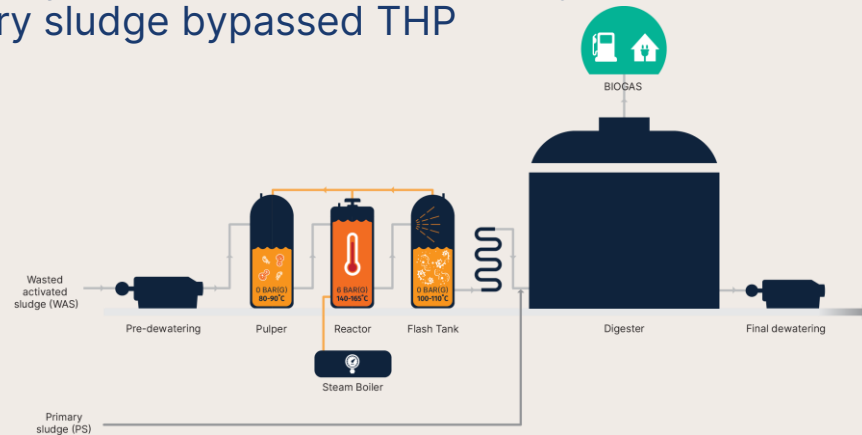
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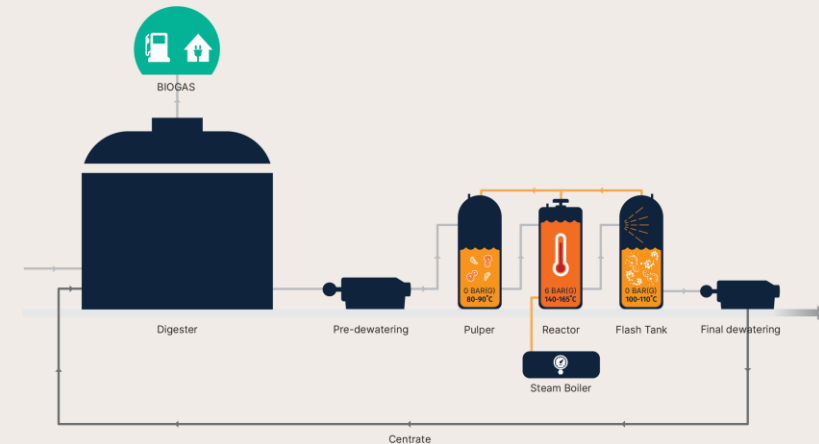
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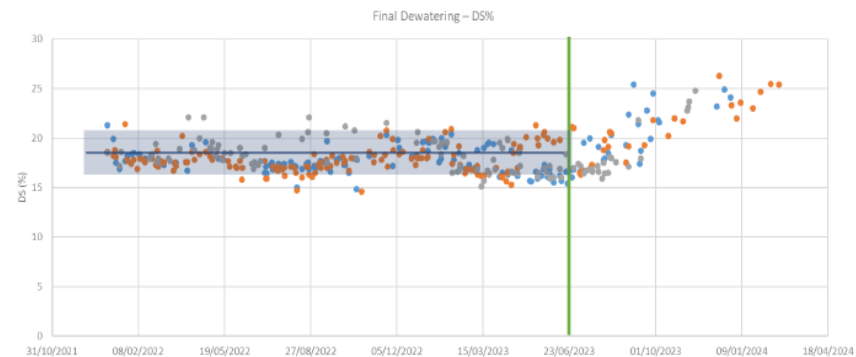
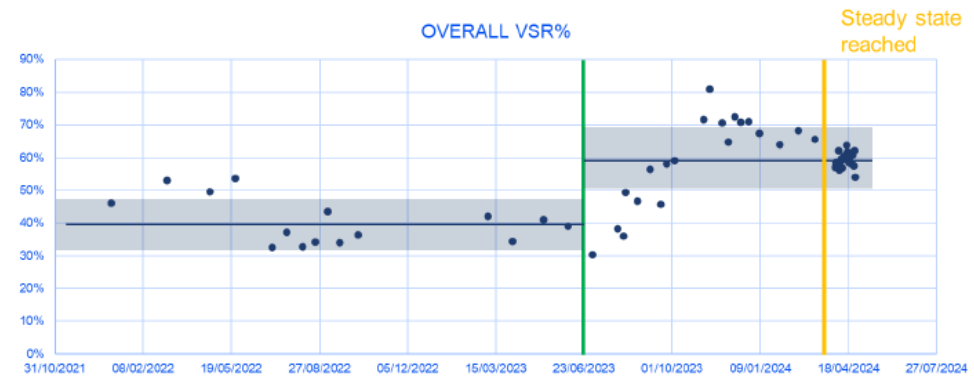
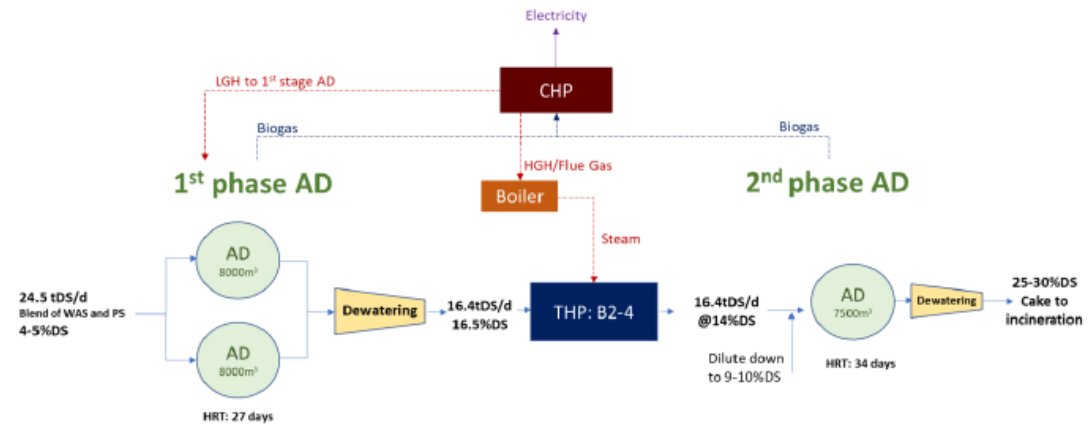
WAS only – Pre-AD THP of WAS only Primary sludge bypassed THP



SolidStream – Post-AD THP

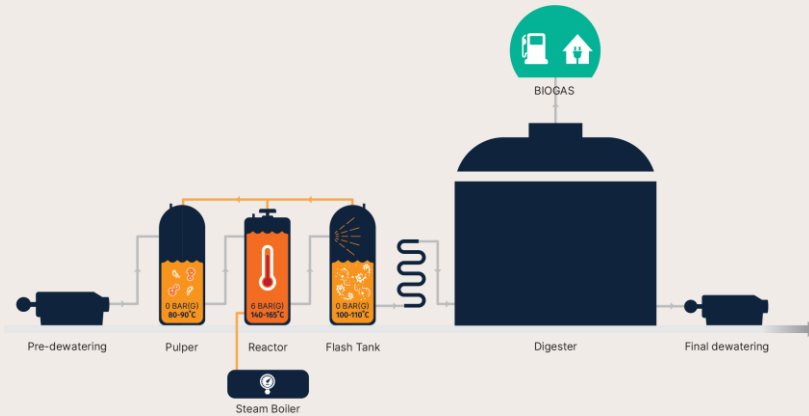


I-THP

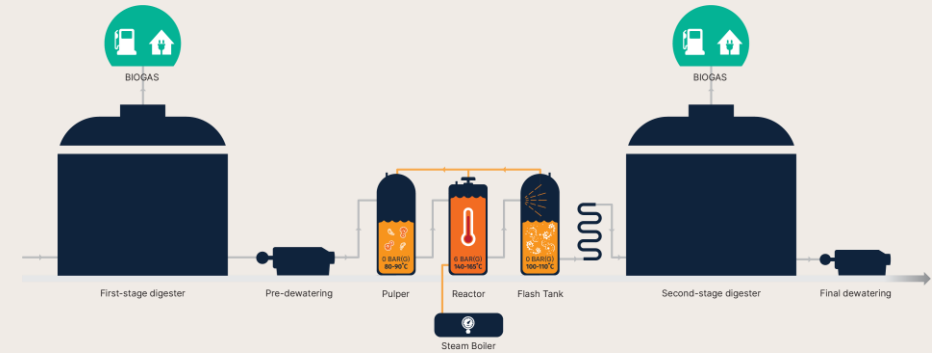


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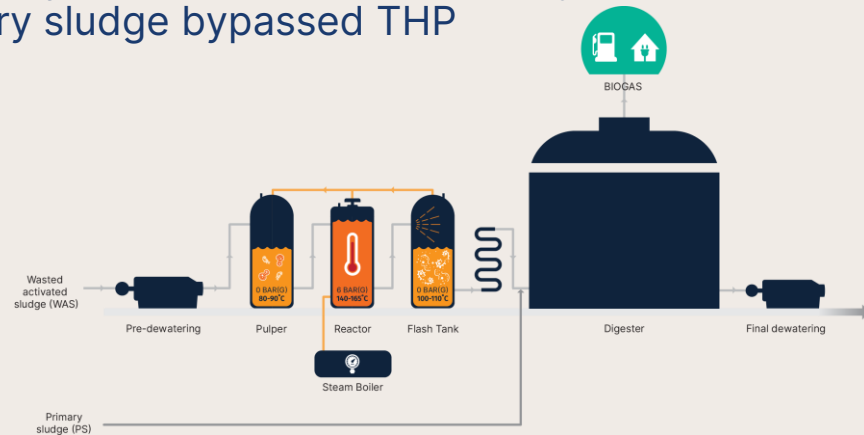
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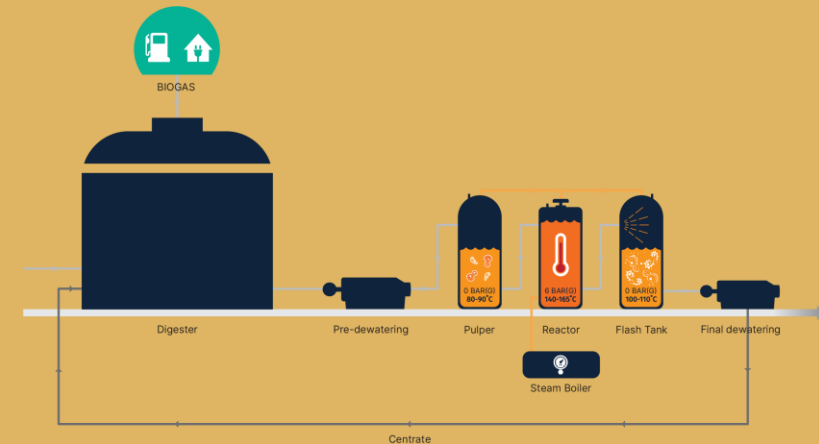
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SolidStream – Post-AD THP



Resultados de una demostración industrial de Cambi Solidstream, AmperVerband, Alemania



Configuración	Periodo de demostración	VS Reducción	Aumento producción de biogás	Deshidratación	Reduccion de volumen
Cambi SolidStream® Post-AD THP	2015-2017	75%	+44%	38-42%	-60%

¡Analicemos juntos cómo optimizar tu caso específico!

Gracias

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