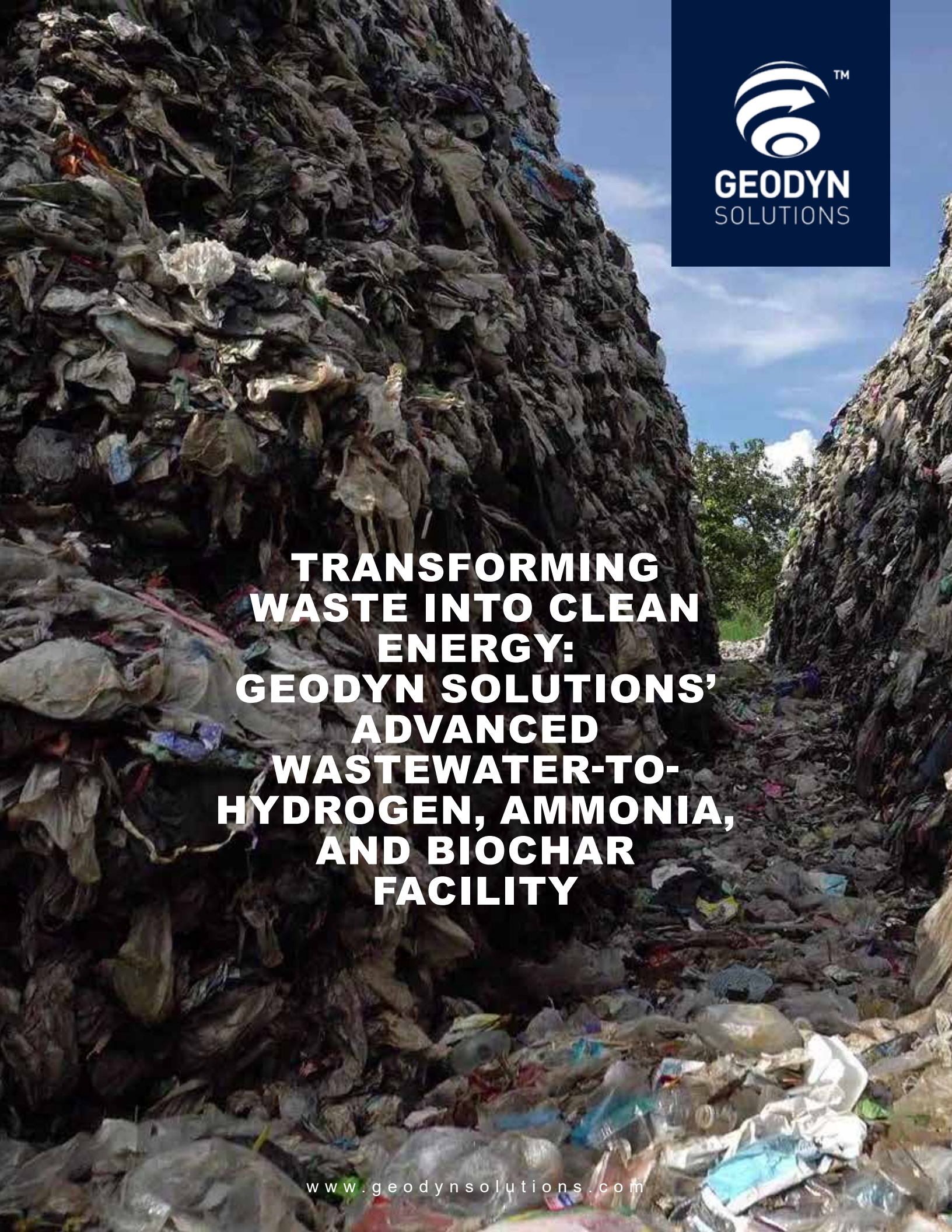

GEODYN SOLUTIONS™

TRANSFORMING WASTE INTO CLEAN ENERGY: GEODYN SOLUTIONS' ADVANCED WASTEWATER-TO-HYDROGEN, AMMONIA, AND BIOCHAR FACILITY

www.geodynsolutions.com

IN THE RACE FOR SUSTAINABLE ENERGY AND ENVIRONMENTAL RESPONSIBILITY, GEODYN SOLUTIONS IS LEADING THE CHARGE WITH ITS STATE-OF-THE-ART ADVANCED WASTEWATER-TO-HYDROGEN, AMMONIA, AND BIOCHAR FACILITY. DESIGNED TO REVOLUTIONIZE WASTEWATER TREATMENT AND RESOURCE RECOVERY, THIS GROUNDBREAKING PROJECT TURNS MUNICIPAL WASTE INTO VALUABLE ENERGY PRODUCTS, CONTRIBUTING TO A CLEANER AND GREENER FUTURE.

THE POWER OF INNOVATION: WASTE TO WEALTH

For decades, wastewater treatment has been seen as a necessary expense rather than an opportunity for economic growth and sustainability. Geodyn Solutions is changing this narrative by implementing cutting-edge gasification, pyrolysis, and advanced filtration technologies to convert biosolids into hydrogen, ammonia, and biochar. This approach not only reduces waste but also produces clean energy and carbon-sequestering materials that benefit industries and the environment alike.

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HOW IT WORKS: CONVERTING WASTEWATER INTO CLEAN ENERGY

At the heart of Geodyn Solutions' facility lies a multi-stage conversion process that extracts valuable resources from wastewater biosolids:

1. **Advanced Wastewater Treatment** – The facility processes 100,000 cubic meters of wastewater daily, removing contaminants and recovering biosolids for further conversion.

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2. **Gasification & Hydrogen Production** – Biosolids undergo a high-temperature gasification process that produces syngas, which is then refined to extract 3,600 tons of hydrogen annually. This clean hydrogen can be used in fuel cells, industrial processes, and as a sustainable fuel alternative.

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3. **Ammonia Synthesis** – The hydrogen is combined with nitrogen to synthesize 3,060 tons of ammonia annually, a crucial ingredient in fertilizers and industrial applications, supporting global food security and clean energy initiatives.

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4. **Biochar Production** – The solid byproduct of gasification and pyrolysis is transformed into 33,750 tons of biochar per year, which is used to improve soil health, capture carbon, and enhance sustainable agriculture.

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5. **CO_2 Sequestration & Environmental Benefits** – By diverting waste from landfills and producing low-carbon energy products, the facility sequesters 600,000 metric tons of CO_2 annually, helping combat climate change.

ECONOMIC & ENVIRONMENTAL IMPACT

At the heart of Geodyn Solutions' facility lies a multi-stage conversion process that extracts valuable resources from wastewater biosolids:

JOB CREATION:

Over 600 direct jobs and 1,800 indirect jobs in construction, operations, and supply chain sectors.

ENERGY INDEPENDENCE:

Producing hydrogen and ammonia locally reduces reliance on imported fossil fuels.

REVENUE GENERATION:

With a 4.12-year ROI, the facility will drive sustainable economic growth through $34 million in annual revenue from hydrogen, ammonia, biochar, and carbon credits.

SUSTAINABILITY LEADERSHIP:

By integrating circular economy principles, the facility aligns with global sustainability goals and helps nations transition to carbon-neutral solutions.

WHY GEODYN SOLUTIONS?

Geodyn Solutions is at the forefront of next-generation wastewater treatment and renewable energy solutions. Our commitment to innovation, sustainability, and economic progress positions us as the leading partner for governments, municipalities, and industries looking to turn waste into wealth.

With cutting-edge technology and a vision for a cleaner planet, our Advanced Wastewater-to-Hydrogen, Ammonia, and Biochar Facility is paving the way for a future powered by sustainability.

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