

The background of the slide is a composite image. On the left, a cyclist in a green jersey is riding a road bike on a paved path that curves through a lush green landscape. In the distance, a city skyline is visible across a body of water. On the right, a white commercial airplane is flying in a clear blue sky, leaving a white contrail. The entire scene is overlaid with a large, semi-transparent white circle that contains the main title and event information.

# **Neste Renewable Jet Fuel**

DOE Bioenergy Technologies Office  
Alternative Aviation Fuel Workshop  
Macon, Georgia  
14 September, 2016

# Safe Harbor Statement

The following information contains, or may be deemed to contain, “forward-looking statements”. These statements relate to future events or our future financial performance, including, but not limited to, strategic plans, potential growth, planned operational changes, expected capital expenditures, future cash sources and requirements, liquidity and cost savings that involve known and unknown risks, uncertainties and other factors that may cause Neste Corporation’s or its businesses’ actual results, levels of activity, performance or achievements to be materially different from those expressed or implied by any forward-looking statements. In some cases, such forward-looking statements can be identified by terminology such as “may,” “will,” “could,” “would,” “should,” “expect,” “plan,” “anticipate,” “intend,” “believe,” “estimate,” “predict,” “potential,” or “continue,” or the negative of those terms or other comparable terminology. By their nature, forward-looking statements involve risks and uncertainties because they relate to events and depend on circumstances that may or may not occur in the future. Future results may vary from the results expressed in, or implied by, the following forward-looking statements, possibly to a material degree. All forward-looking statements made in this presentation based on information presently available to management and Neste Corporation assumes no obligation to update any forward-looking statements. Nothing in this presentation constitutes investment advice and this presentation shall not constitute an offer to sell or the solicitation of an offer to buy any securities or otherwise to engage in any investment activity.

# Neste in brief

5,000  
employees  
in 15 countries

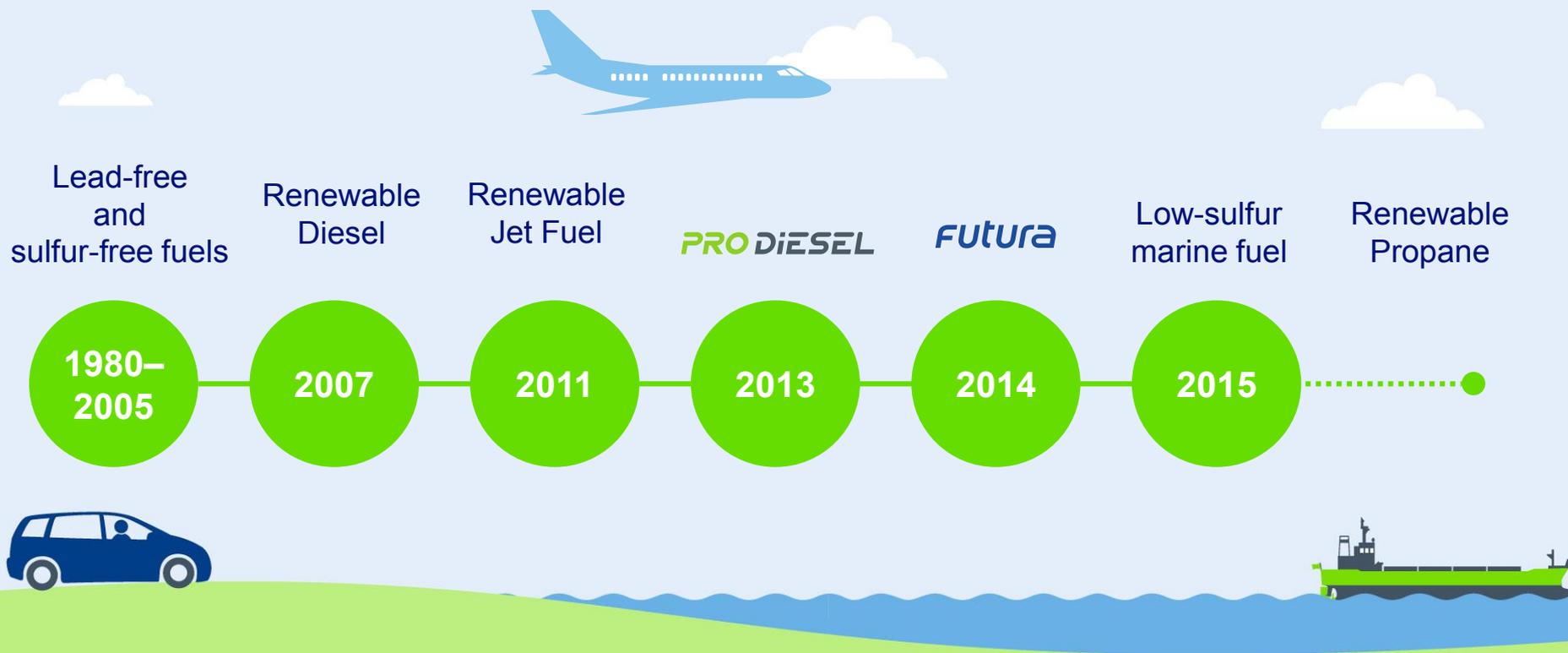
Revenue  
€ 11 billion  
Comparable  
operating profit  
€ 925 million

Refining capacity:  
260,000 bpd of  
petroleum products  
54,000 bpd of  
renewable diesel

6<sup>th</sup> place  
in the Global 100  
list of the world's  
most sustainable  
companies

Refining and  
marketing company  
focused on  
low-emission, high-  
quality traffic fuels

# Neste is passionate about cleaner fuels

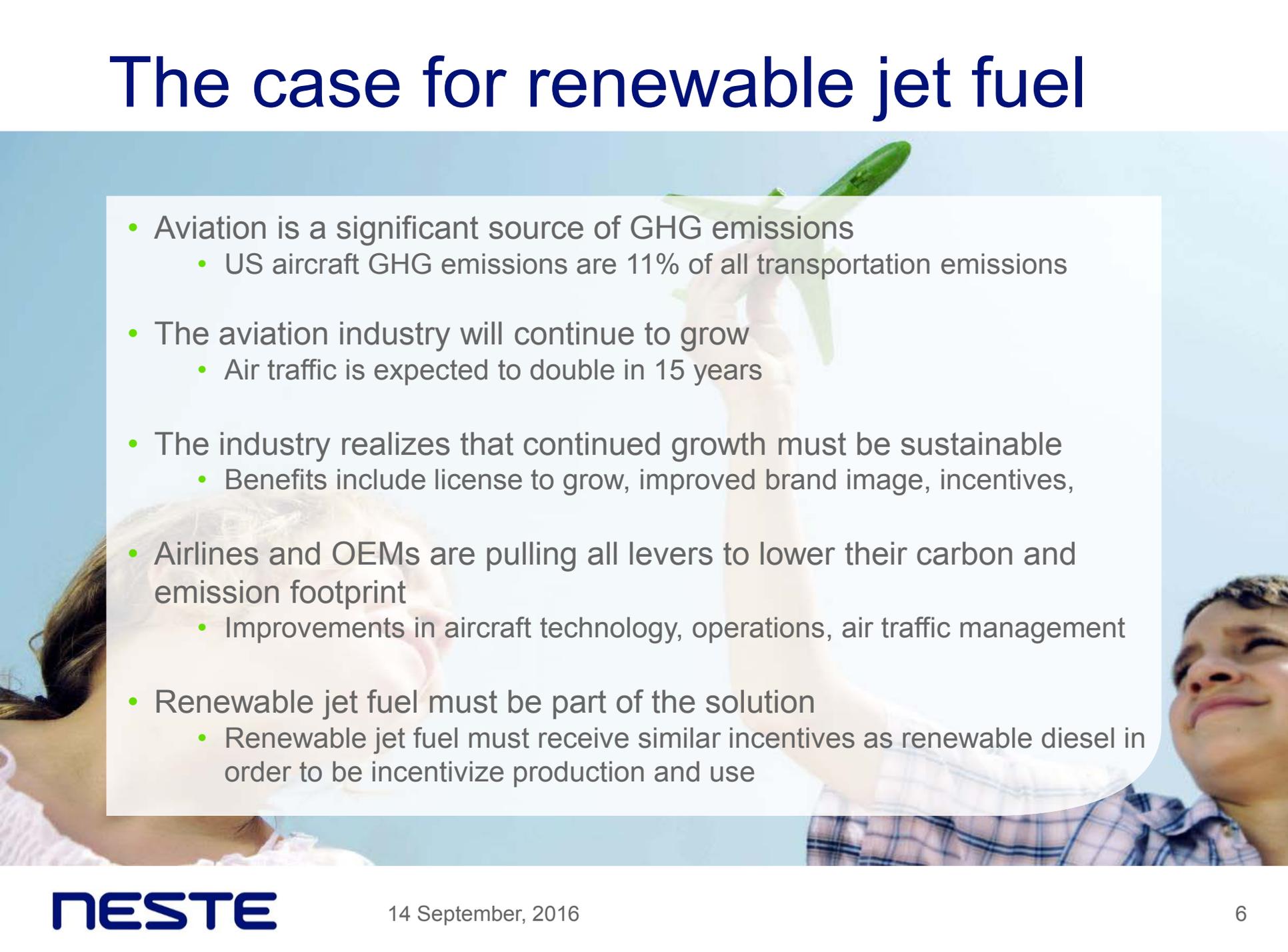


# Neste is a world leader and pioneer in renewable diesel



- Neste Renewable Diesel is developed and patented by Neste
- Annual production capacity 2.4 million tons = 815 million gallons
- 100% renewable, versatile and sustainable raw material base
- Renewable diesel meets diesel specifications including ASTM D975 and CARB diesel specifications
- No blend wall; can be used neat
- Being used neat by consumers and public and private fleets

# The case for renewable jet fuel

- 
- A young boy in a plaid shirt is holding a green toy airplane against a clear blue sky. A young girl is partially visible in the foreground on the left, looking towards the right. The background is a bright, clear blue sky.
- Aviation is a significant source of GHG emissions
    - US aircraft GHG emissions are 11% of all transportation emissions
  - The aviation industry will continue to grow
    - Air traffic is expected to double in 15 years
  - The industry realizes that continued growth must be sustainable
    - Benefits include license to grow, improved brand image, incentives,
  - Airlines and OEMs are pulling all levers to lower their carbon and emission footprint
    - Improvements in aircraft technology, operations, air traffic management
  - Renewable jet fuel must be part of the solution
    - Renewable jet fuel must receive similar incentives as renewable diesel in order to be incentivize production and use

## Neste Renewable Jet Fuel

- ✓ Offers airlines an easy way to lower their carbon footprint and cut their emissions
- ✓ Meets ASTM D7566 specification
- ✓ High energy density
- ✓ Already available at scale
  - ✓ Over a thousand commercial flights on Lufthansa
  - ✓ Introduced to Oslo airport for ITAKA project

# Proven high-level performance since 2011

## Demonstrated on over 1,000 Lufthansa flights

**1,187**

Lufthansa flights

**1 600  
tons**

of Neste renewable  
jet fuel blend  
consumed  
(50% blend)

**1500  
tons**

reduction in CO<sub>2</sub>  
emissions

*“Our burnFAIR project went off smoothly and to our fullest satisfaction. As expected, the biofuel proved its worth in daily flight operations.”*

Joachim Buse

Vice President Aviation Biofuel at Lufthansa

# In January 2016, Oslo Airport offered Neste Renewable Jet Fuel via the hydrant system



- Neste has produced renewable jet fuel to be used by airlines Lufthansa, KLM and SAS at Oslo airport
- The fuel is transferred to Oslo as a 50% blend with conventional jet fuel
- For the first time, the distribution takes place via the airport's existing distribution system (hydrant)
- The fuel was produced in Porvoo, Finland, as part of the EU-funded ITAKA\* project
- The feedstock is 100% certified camelina oil

\* <http://www.itaka-project.eu/default.aspx>

# The next development of HEFA: HEFA+ renewable jet fuel should accelerate use



*“The airplane performed as designed with the green diesel blend, just as it does with conventional jet fuel. This is exactly what we want to see in flight tests with a new type of fuel.”*

Captain Mike Carriker, Chief Pilot Boeing Product Development and 777X describing test flight with 15% HEFA+ supplied by Neste.

December 2014

- HEFA+ renewable jet fuel is a potential game changer
- Supply should increase as more efficient to produce
- Will be used at lower blend levels: likely max 15% HEFA+ vs. max 50% HEFA.
- Boeing is leading the effort to amend ASTM 7566 Annex II to include HEFA+ specification
- Neste is supporting with supply of fuel and testing
- Research report will be issued in Fall 2016

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**NESTE**

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# Thank you!

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