





resident Barack Obama is committed to creating three million new jobs over the next two years through the promised American Recovery and Reinvestment Plan. The new president proposes to spend at least US\$775 billion to double production of renewable energy, renovate aging infrastructure, modernize healthcare technology and do other things to stimulate high skill–based employment and create substantial economic and social benefits for the American people, including investment in critically important technologies.

While the airline industry is focusing its efforts on securing stimulus funding for new air traffic management technologies, as well as related energy and environmental improvement investments and jobs, more can be done. I hope that Obama's plan includes grants and tax incentives aimed at creating 100,000 new jobs in aircraft maintenance, repair and overhaul (MRO) with these five outstanding goals:

- Retrain and certificate skilled auto workers to perform MRO on aircraft and all of their high-tech components;
- 2. Redevelop idled military air bases and refurbish hangars to handle civil aircraft MRO;
- 3. Upgrade the equipment and technology of the 4,000 certificated aircraft repair facilities in the United States;
- Create a real partnership between U.S. airlines, contract MRO facilities and labor unions to generate high-paying U.S. jobs in a way that stimulates technological innovation and helps U.S. airlines become more competitive with their global counterparts; and,
- 5. Create regional centers of excellence for maintenance and alteration of major aircraft types, such as widebody airplanes, to enhance the U.S. reputation for excellence in the MRO field. That will cause U.S. and non-U.S. carriers alike to locate and increase MRO work in this country on the basis of cost and quality.

U.S. airlines employ about 72 people per airplane, which includes six per airplane in maintenance jobs. With an overall fleet of more than 7,800 airplanes, U.S. airlines employ approximately 50,000 people in their maintenance departments. However, that does not include the far larger number of people taking care of airplanes and engines through service contracts.

U.S. aircraft repair stations currently employ more than 212,000 people. These stations perform work not only for U.S. airlines but for many non-U.S. airlines as well.

The type of MRO provided ranges from minor servicing to major overhaul of components, engines and airframes. It should be noted that all third-party mechanics are required to meet the same professional standards as those employed by the airlines. And all maintenance work is subject to FAA audits and airline quality assurance programs, regardless of whether that work is performed by the carrier or a contract maintenance vendor.

While some critics have charged that outsourcing airline MRO poses a

threat to safety, independent government figures do not support that conclusion. To the contrary, data compiled by the NTSB clearly show that as U.S. airlines increased contracted maintenance work to vendors around the world, accidents with maintenance as a probable cause declined from 0.05 per 100,000 departures to absolute zero in recent years (Figure 1).

In the post-9/11 environment, as airlines downsized to meet a reduced demand for air travel, it became more difficult for them to efficiently use their exhaustive maintenance infrastructure. That is the primary cause for increased contracting, mostly to U.S. vendors but also including some internationally. However, as the chart demonstrates, maintenance-related safety performance has not declined. It is the best that it has ever been.

We need to accept that air transport is a global business and must be conducted globally. Even the largest engines are readily transportable, enabling access to repair centers around the world. Safety is not an issue. Rather than trying to erect barriers, we — the U.S. aviation

industry, U.S. policymakers and representatives of labor — should be doing all that we can to enhance the competitiveness of U.S.-based MRO operations to gain the lion's share of a \$42 billion global business.

The largest "airline" MRO providers in the United States earn annual revenues of several hundred million dollars by servicing other carriers. Compare that to Lufthansa Technik, the maintenance arm of the leading German carrier, with annual revenues of \$3 billion from contracted maintenance for customers beyond Lufthansa and a workforce of 19,000.

The value of supporting this important industry has not gone unnoticed. In 2008, with the help of several nations that recognized the advantage of establishing world-class MRO capabilities within their borders, Lufthansa Technik expanded its operations. As similar international growth moves rapidly ahead, we must not be left behind.

While several world-class facilities exist in the U.S. today, we do not have the capacity to support the domestic fleets. On a national level, we should strive to further develop capabilities and turn U.S. MRO operations — whether airline or independent — into the world's best. We are the country, after all, that is known for its "can do" spirit.

As well as being great inventors, Orville and Wilbur Wright exemplified the U.S. tradition of producing superb mechanics. From a bicycle shop in Dayton, Ohio, they created the aviation industry. There is no reason why those with well-developed mechanical and technical skills should not be able to make a similar move from automobiles to high-paying jobs in the maintenance, repair and overhaul of aircraft.



Figure 1