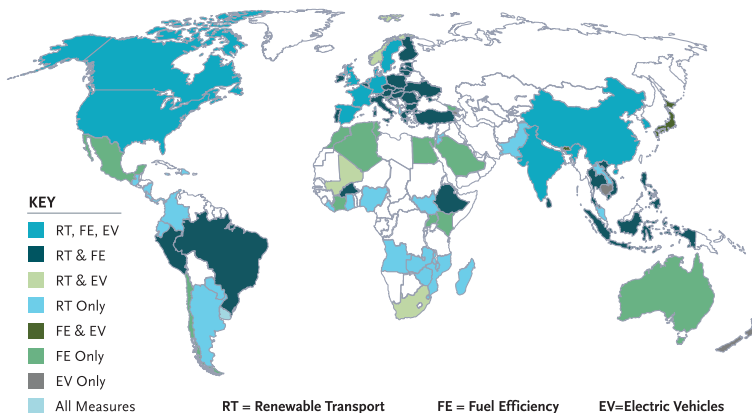


The market for fuels and vehicles is increasingly global and understanding what is happening around the world can enhance long-term strategic planning. As automakers increasingly seek to harmonize their vehicle production plans and governments seek best practices to achieve their specific objectives, regulations that may seem distant to some markets can still have significant influence. For markets that have not yet acted to address these issues, it may only be a matter of time before regulators will likely look to other nations for ideas. "Global Initiatives" is a concise and well-organized assessment of these efforts, providing a valuable overview about external forces that seek to influence how the market evolves.

## Drivers of Air Pollution, Climate Change and Congestion Mitigation

By 2040, the world population is expected to expand nearly 25% to 9.1 billion and the global car fleet is expected to double. Mitigating air pollution, GHG emissions, congestion as well as implementing the Paris Agreement targets, is driving a number of global initiatives such as: stringent fuel economy standards, zero emission vehicle targets, biofuels blending mandates, car bans and limitations, tougher emissions standards and improved fuel quality. Such regulations are already in place or planned for most of the countries throughout the world.

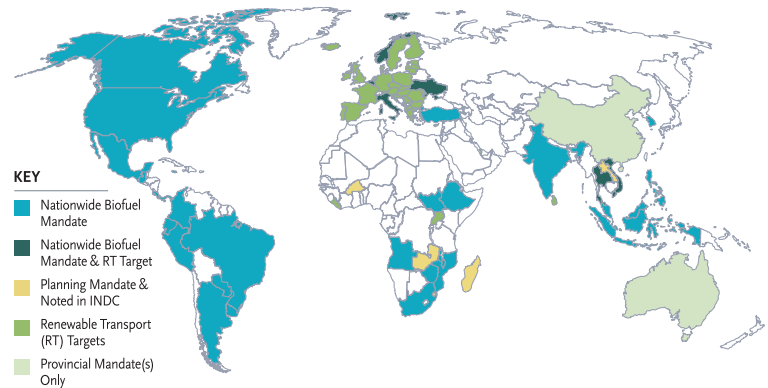
### Global Renewable Transport, Fuel Efficiency & Zero Emissions Vehicle Initiatives (Current or Planned), 2016



## Biofuels Lead Transport Policies

Biofuels programs are the number one strategy countries are planning to comply with transport-related Paris Agreement commitments. Nearly 60 countries have developed or will be developing blend mandates and fiscal incentives for biofuel blending programs.

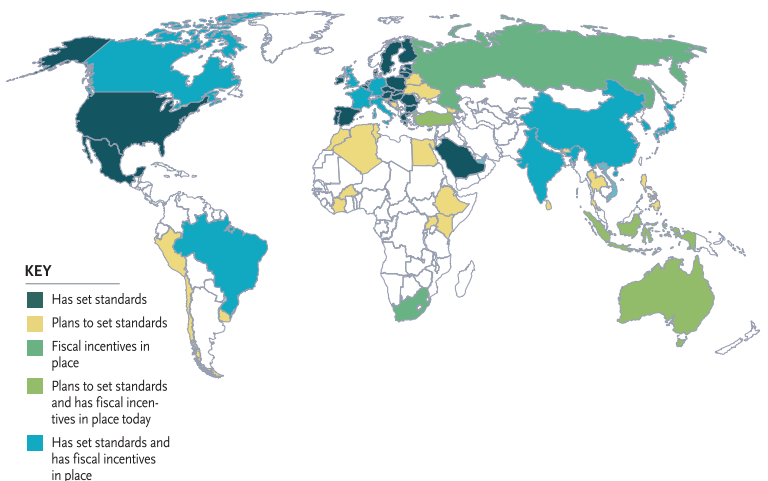
### Global Renewable Transport Obligations, Biofuels Mandates and Countries Planning to Implement Biofuels Programs as Part of Their Paris Agreement Commitments



## Fuel Economy Regulations Gain Traction

In the last ten years, the number of countries with mandatory GHG emission/fuel economy standards have increased from just four to more than 40 countries which either have implemented or are planning to implement such programs. Although standards have become more ambitious over time, the timeframe for regulations to be implemented has been extended and compliance flexibility is being incorporated into programs.

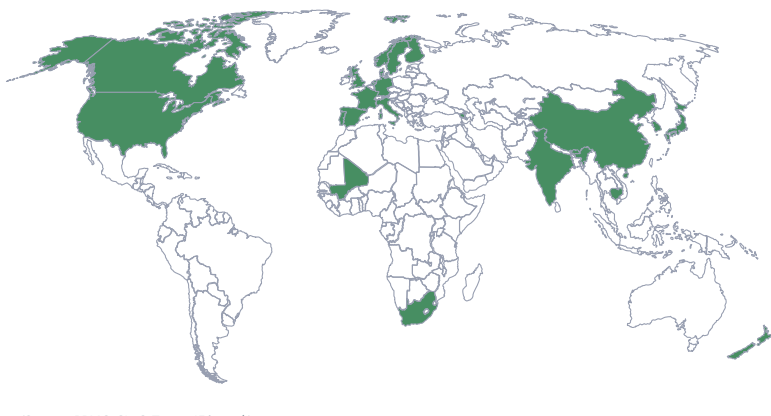
### Countries That Either Have or Plan to Put into Place Fuel Economy Targets, Including Those Countries That Set Fiscal Policies to Encourage Fuel Economy



## Momentum is Gaining to Mandate Changes to Powertrains

In 2017, multiple countries announced plans to mandate the transition from internal combustion engines to electric power train vehicles. While several countries have already implemented zero emission vehicle policies in select markets and regions, and several more cities have implemented car-free or pedestrian only zones, this recent trend of entire nations setting policies to transition completely to electric vehicles represents a much more active role for governments to influence the direction of transportation energy.

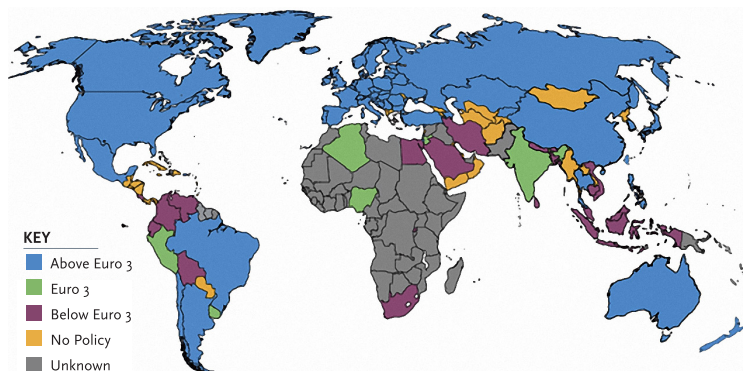
### Countries That Have ZEV Targets or Support Policies



## Improvements in Traditional Energy and Fuel Remain Critical

Despite efforts to accelerate the transition to alternative powertrains, internal combustion engines, gasoline and diesel fuel will continue to dominate the transportation sector for years to come. Consequently, governments are acting to improve fuel quality and emissions standards for traditional vehicles. Most global markets have already acted to reduce sulfur from diesel fuel and the vast majority of the developed world have imposed emissions standards on light duty vehicles. Although such standards are not uniform, the efforts to continually improve standards increases the potential for cross-border harmonization.

### Status of Light-Duty Vehicle Emission Standards



## About the Author

Tammy Klein is the Principal Consultant for Future Fuel Strategies, which provides market and policy intelligence with unique insight and analysis for the global fuels industry. Tammy provides consulting service to clients in the auto, oil and associated industries, as well as governments and NGOs and helps them understand current and future fuels trends and issues; or in the case of government and NGOs, the best policies to develop and implement. Tammy also provides a membership-based service, the Future Fuels Outlook, with subscribers from the auto, oil and biofuels industries. She is an expert on conventional, biofuels and alternative fuels market and policy issues.

Tammy is formerly Senior Vice President for Stratass Advisors/Hart Energy and in that capacity was responsible for overseeing all aspects of its fuels and transport-related research, products, services, staff and consultancy. She continues to serve as an advisor to many companies, governments and NGOs on transportation fuels issues. She has advised the Organization of Petroleum Exporting Countries (OPEC), International Petroleum Industry Environmental Conservation Association (IPIECA), Energy Management Authority (EMA) of Singapore and Natural Resources Defense Council (NRDC) and the International Energy Agency (IEA), among many others. Prior to her time at Hart Energy, she was an associate at Venable LLP specializing in environmental and administrative law matters. She holds a juris doctor from the Georgetown University Law Center and a bachelor of science in journalism from the University of Florida.

## Conclusion

In response to growing concerns about reducing air pollution from motor vehicles, mitigating transport-related climate change and improving traffic congestion, countries have been setting a variety of policies. As nations learn from one another, regulations will continue to evolve and ultimately will affect all markets throughout the world. Realizing that these policies could spread to more countries, understanding how they can affect the market is critical to long-term market evaluation. "Global Initiatives" is a critical resource for those seeking to better understand the future of mobility.

**Download the full report at [fuelsinstitute.org/research](https://fuelsinstitute.org/research)**

## About the Fuels Institute

Founded by NACS in 2013, the Fuels Institute is a nonprofit tax-exempt social welfare organization under section 501 (c) (4) of the Internal Revenue Code. We are dedicated to evaluating issues affecting the vehicles and fuels markets. We commission comprehensive, fact-based research projects that are designed to answer questions, not advocate a specific outcome. Our reports address the interests of industry stakeholders—from business owners making long-term investment decisions to policy-makers considering legislation and regulations that affect these markets.