The 2011 HSTP is a policy document that sets the goals and objectives that guides system level plans and master plans for each of DOT’s modes of transportation.

Of the eight HSTP goals, the goal relating to energy states the following:

“Support the State’s energy goal of 70% clean energy, which includes 40% produced by renewable energy and 30% from increased energy efficiency, enhancing the reliability and security of energy sources.”
Associated with the HSTP goal are 5 objectives that the department seeks to implement that would help DOT to reach its clean energy goals.

- **Objective 1**: Support the national goal to reduce transportation-related greenhouse gas (GHG) emissions and reliance on foreign oil.

- **Objective 2**: Actively pursue actions in transportation which help to achieve the State Clean Energy Goal of 40% renewable energy by 2030.

- **Objective 3**: Identify ways to increase energy efficiency by 30% at transportation facilities.

- **Objective 4**: Expand the use of alternative fuel and electric vehicles and provide electric recharging at transportation facilities.

- **Objective 5**: Use opportunities where and when practicable and available, to use power from renewable energy to supply power to transportation facilities.
Implementation

- **Airports Division to cut energy use by 49% saving at least $518M in energy costs over the next 20 years**

  The airports will be modernized with the latest in energy-efficient and green technology, providing a high-impact solution for the Abercrombie Administration’s aggressive pursuit of 70 percent clean energy use for the state of Hawaii by 2030.

  The project will deliver results by replacing 372 transformers and 74,500 light fixtures, installing 9,100 solar photovoltaic panels; and include upgrades and replacement of chilled water and air conditioning systems, installation of smart controls, and deferred maintenance such as roof repairs to accommodate the upgrades. The $150 million contract was awarded to Johnson Controls through a state competitive procurement process for Energy Performance Contracting (EPC).

- **Honolulu International Airport Diamond Head Concourse Air Conditioning Chiller Plant**

  Part of a planned three concourse air conditioning efficiency project. The new air conditioning system is 50% more energy efficient. Once the chiller plants are completed, the electricity bill savings will be $2.3 million annually, reducing CO₂ emissions by 6,413 tons per year.

- **Photovoltaic (PV) Power Systems at eight HDOT facilities across the state**

  A public-private partnership with Hoku Solar. The facilities with solar combined will produce 1.2 million hours of clean, solar energy annually, which is enough to power up to 150 homes. Over the 20-year system lifetime, these systems collectively are targeted to offset 12,000 tons of CO₂ emissions, which is equivalent to removing 1,400 cars off the road. (Sites with PV systems installed include Līhu‘e Airport, Kona International Airport at Keāhole, Hilo International Airport, Kahului Airport Hangar and Cargo Building, DOT Highways Division Baseyard in Līhu‘e, the Nāwiliwili Harbor DOT Administration Building, and the Pier 1 Shed at Kahului Harbor.)

- **Airport Cell Phone Waiting Areas at: Honolulu International Airport, Līhu‘e Airport, Kona International Airport at Keāhole, Hilo International Airport, and the Kahului Airport**

  These cell phone waiting areas reduce the amount of driving and traffic congestion around airports because of people waiting to pick up airline passengers. It is a very simple example of one way to reduce energy use.
The HDOT long range multi-modal land transportation plan for our federal highway system addresses future transportation needs for freight, motorists, transit, bicyclists, and pedestrians based on land use and socio-economic projections through 2035. Some of those planning factors relating to clean energy are:

- Environment and Sustainability.
- Modal Integration.
- Economic Vitality.
- System Efficiency Management and Operations.
- Transportation Access Mobility
Federal Highway Trust Fund

- On a national level, the gasoline fuel tax has been an effective mechanism for funding highway maintenance for decades; ensuring that those who use the roadway the most pay a greater share of the cost to maintain them. As the country moves away from gasoline-powered vehicles and toward alternate-fuel and electric vehicles, there will be less money available for highway maintenance without a corresponding drop in consumption usage. The federal gas tax has not been raised since 1993, and has not kept pace with rising inflation. Compounding this is the corresponding gap between revenues and nationwide funding needs for infrastructure.

- The challenge is to develop a new funding mechanism that distributes the cost of maintenance equitably to all users. Federal Highways Administration has established a Western Road Usage Charging Consortium upon which we are one of several state DOT’s participating in this at a national level to come up with alternatives to address this societal shift on fuel efficient vehicles.
Motor Vehicle Fuel Consumption History

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Gasoline</th>
<th>Diesel</th>
<th>Alternative Fuels</th>
<th>Total</th>
</tr>
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<tbody>
<tr>
<td>2004</td>
<td>459,132</td>
<td>170,318</td>
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<tr>
<td>2005</td>
<td>455,846</td>
<td>249,407</td>
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<tr>
<td>2006</td>
<td>466,542</td>
<td>211,448</td>
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<td>2007</td>
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<td>455,390</td>
<td>296,742</td>
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<td>455,703</td>
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<td>29,074</td>
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<td>2013</td>
<td>444,308</td>
<td>152,211</td>
<td>31,026 ***</td>
<td>627,545</td>
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</tbody>
</table>

* The increase in alternative fuel after fiscal year 2007 is due to filing format changes effective September 2007 to reflect reporting requirements from the Federal Highway Administration ("FHWA"). Some alternative fuel consumption previously filed as gasoline now have to be separated and reported as alternative fuels.

** Decrease due to economic downturn, higher fuel costs and reduced travel, and decline in non-highway consumption.

*** Decrease due to reduction in non-highway consumption.
NEW DAY IN HAWAII

Mahalo and Aloha