


**Table 23. Engine-related restrictions.**

<b>Initiative 20: Engine-Related Restrictions</b>	
<p><b>Description:</b> A special case of vehicle restriction granting access to a target area only for vehicles that meet a certain level of environmental standard. These strategies try to reduce the environmental externalities of freight traffic by fostering the use of environmentally friendly technologies.</p>	
<p><b>Targeted mode:</b> All traffic</p>	<p><b>Geographic scope:</b> Area</p>
<p><b>Type of initiative:</b> Traffic management: environmental/vehicle restrictions</p>	<p><b>Primary objective:</b> Reduce pollution</p>
<p><b>Expected costs and level of effort to implement:</b> Engine-related restrictions require careful planning that should include stakeholder engagement, a full assessment of possible outcomes, and an analysis of the initiative’s objectives. For efficient implementation, additional strategies may be required (e.g., dedicated loading/unloading zones, UCCs).</p>	
<p><b>Advantages:</b></p> <ul style="list-style-type: none"> <li>• Environmental sustainability</li> <li>• When combined with eco-loading zones:               <ul style="list-style-type: none"> <li>– May increase efficiency</li> <li>– May decrease operational costs</li> </ul> </li> </ul>	<p><b>Disadvantages:</b></p> <ul style="list-style-type: none"> <li>• High probability for unintended consequences:               <ul style="list-style-type: none"> <li>– Increase operational costs</li> </ul> </li> <li>• Require carriers to upgrade their fleets</li> <li>• Hard to enforce</li> </ul>
<p><b>Examples:</b></p> <ul style="list-style-type: none"> <li>• European cities: Copenhagen, Denmark; Amsterdam, The Netherlands; Berlin, Germany; and London, England (Quak 2008; PARFUM 2009; LEEZEN 2010)</li> <li>• Combined Engine Relate Restrictions with Eco-Loading Zones: Bremen, Germany (LEEZEN 2010)</li> <li>• Clean Truck Program Ports of Los Angeles/Long Beach, California, United States (Port of Los Angeles 2013a)</li> </ul>	
	
<p>Source: Rensselaer Polytechnic Institute – CITE</p>	
<p><b>Related alternatives:</b> 1. <a href="#">Emission Standards</a>; 2. <a href="#">Low Noise Delivery Programs/Regulations</a>; 3. <a href="#">Low Emission Zones</a> 4. <a href="#">Operational Incentive for Electric/Low Emission Vehicles</a>; 5. <a href="#">Anti-Idling Programs</a></p>	
<p><b>References:</b> Quak 2008; PARFUM 2009; LEEZEN 2010; Port of Los Angeles 2013a; Port of Los Angeles 2013b; American Transportation Research Institute 2014</p>	