



## **A Majority Staff Report**

**Subcommittee on Cybersecurity,  
Infrastructure Protection, and  
Security Technologies**

Rep. Dan Lungren, Chairman

**Subcommittee on Emergency  
Preparedness, Response, and  
Communications**

Rep. Gus Bilirakis, Chairman

of the

**Committee on Homeland Security**

Rep. Peter T. King, Chairman



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## Executive Summary

The Federal Government rulemaking process provides necessary guidance to carry out Congressional mandates and other policy instructions. Every year over 3,000 final rules are issued by different Executive Branch agencies.<sup>1</sup> Additionally, the President uses the Executive Order process to provide instructions to Federal agencies on different policy matters.

Agencies are charged with harnessing their capacity to leverage subject matter expertise with an ability to focus on specific issues to promulgate regulations that clarify and complement Congressional intent. Regulations are meant to be understandable interpretations of the law that are easy for citizens to follow. In today's complicated Federal Government, we know this is hardly ever the case.

The Department of Homeland Security (DHS) was created in the wake of the September 11, 2001 terrorist attacks to “ensure the Homeland is safe, secure and resilient against terrorism and other hazards.”<sup>2</sup> As part of that mission, DHS is charged with critical infrastructure protection and preparedness for, response to and mitigation of terror events and natural disasters, among other important security matters.<sup>3</sup>

The Majority staff of the Committee on Homeland Security has reviewed a number of regulations and orders that impact the Nation’s ability to mitigate and respond to terrorist attacks and natural disasters. The corresponding regulations and executive orders in some cases overlap, leave security gaps, and result in coordination and information sharing challenges. The report focuses on the impact of overlapping and conflicting regulations on government and public sector response efforts.

Big-government Federal regulations have imperiled our security, cost lives, and wasted money. The problems identified in the report hindered response and recovery efforts during Hurricane Katrina, the BP oil spill, and the 2010 snow storms. During Katrina regulatory hurdles delayed transport of needed supplies and restoration of essential services to a city crippled by disaster. While some regulatory waivers were issued within days of the storm, enforcement of those waivers was spotty. The result was delays of days or weeks before supplies and services began to flow. Three years later, FEMA had improved its immediate response efforts,<sup>4</sup> but still showed problems dealing with regulatory challenges when Midwest flood victims waited up to two weeks for assistance.

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<sup>1</sup> Maeve P. Carey, Cong. Research Serv., RL32240, *The Federal Rulemaking Process: An Overview* (Feb. 22, 2011), <http://www.crs.gov/pages/Reports.aspx?PRODCODE=RL32240&Source=search>.

<sup>2</sup> Dep’t. Homeland Sec., *Mission and Responsibilities*, <http://www.dhs.gov/xabout/responsibilities.shtm> (last visited July 10, 2012).

<sup>3</sup> While the issues presented in this report could easily apply to public health emergencies, biological, nuclear events as well as natural disasters and terrorist attacks, the staff chose to view them through the lens of critical infrastructure. Critical infrastructure is leveraged by terrorists in their planning, is second only to human loss after a natural disasters. Restoring critical infrastructure systems is essential to restoring a sense of normalcy after any of these types of events.

<sup>4</sup> Seth Wenig, *Victims of Midwest Flooding Praise FEMA*, USA Today (June 23, 2012, 4:07 PM), [http://www.usatoday.com/weather/floods/2008-06-23-fema\\_N.htm](http://www.usatoday.com/weather/floods/2008-06-23-fema_N.htm).

DHS has focused heavily on response and community preparedness. The agency must recognize that while each disaster is unique and will present unique challenges, every disaster is complicated when the agency does not have a plan to deal with regulatory challenges in place *beforehand*. The agency has begun a regulatory review which looks at the costs of some of its own regulations. However, it has not set up a system to review the impacts of regulations and create a policy to deal with those impacts. This is despite recommendations from the National Infrastructure Advisory Council and the 9/11 Commission.<sup>5</sup>

DHS has the ability to fix some of the problems, but has not done so. Until it begins a concerted effort to improve, the response to and recovery from future terrorist attacks, natural disasters, and other emergencies will be hindered. Federal regulations that impact DHS should be streamlined, harmonized, and integrated into a more unified response/recovery framework that prioritizes people over government red tape.

### **Analysis of Overlapping and Conflicting Regulations**

While the Code of Federal Regulations is filled with thousands of examples across the Federal government, there are a number of regulations that stem from, or are related to, Department of Homeland Security (DHS) operations that actually inhibit its mission. The regulations challenge the Nation's ability to prepare for and respond to both natural hazards and security risks.

In 2005, Hurricane Katrina devastated the Gulf Coast. During that time, government resources were pumped into the region with outcomes that can be kindly criticized as "uneven." Among the issues that complicated the response and recovery were regulatory problems. Fuel mixture regulations for tanker trucks delayed the movement of food and medical supplies to the disaster theater, while private fuel providers searched for appropriate ethanol mixes as required by the Environmental Protection Agency (EPA). Additionally, State level checkpoint restrictions and effluent<sup>6</sup> limitations under the Clean Water Act prevented the transport of chlorine to treat water systems and provide potable water to disaster victims. The Environmental Protection Agency (EPA) and Department of Transportation (DOT) issued waivers in the days and weeks after Katrina made landfall, but disorganization on the ground still delayed delivery of these systems in the wake of recovery.

While it is within the authorities of respective agencies of jurisdiction to proactively provide exceptions, they have not done so to date. DHS also has the power to require inter-agency

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<sup>5</sup>National Security Preparedness Group, *Tenth Anniversary Report Card: The Status of the 9/11 Commission Recommendations*, Bipartisan Policy Center (2011), <http://abcnews.go.com/images/Blotter/Final%20NSPFG%20911%20Report%20Card%20August%202011.pdf> (solving the unity of command problem includes agency coordination on response and recovery issues, including regulations).

<sup>6</sup> See Evtl. Prot. Agency, *Terms & Acronyms*, [http://ofmpub.epa.gov/sor\\_internet/registry/termreg/searchandretrieve/termsandacronyms/search.do](http://ofmpub.epa.gov/sor_internet/registry/termreg/searchandretrieve/termsandacronyms/search.do) (last visited June 27, 2012) (the Environmental Protection Agency defines effluent as the "discharge of liquid waste from a wastewater treatment facility, factory or industry, into a local water body.").

agreements, memoranda of understanding or special provisions to deal with the problems these regulations present in a disaster theater. It can do so in anticipation of certain issues, rather than afterwards. To date it has not done so.

While these scenarios happened during a natural disaster, the impacts could be worse in the event of a terrorist attack. Certain regulations and the impediments caused by those regulations are threats to our security and resilience. The regulations identified in this report point to what are merely symptoms of a larger problem: systemic resistance to information sharing and inter-agency coordination and a failure to inventory and reconcile regulatory processes from an event mitigation and recovery mindset.

### *I. National Environmental Policy Act of 1969 and Exceptions to its Requirements*

The need for environmental assessments (EA) and environmental impact statements (EIS) stems from the National Environmental Policy Act of 1996 (NEPA). Because they are designed to protect public health and the integrity of our natural resources, EIS and EAs are meant to be thoughtful, determinative processes. As is the case with nearly all the regulations referenced in this report, this is an appropriate application under normal conditions. However, during a disaster the process is burdensome. During Hurricane Katrina and other events, some waivers were granted to alleviate the burden of compliance with certain EPA requirements for State and local governments. However, the waivers do not apply to private industry, which own 85% of critical infrastructure.<sup>7</sup> The lack of waivers or an expedited process causes delays in restoring large systems like electric power, heating oil services and water treatment.<sup>8</sup>

The Council for Environmental Quality (CEQ) was created to promulgate regulations implementing NEPA.<sup>9</sup> Each Federal agency then promulgates regulations governing how to comply with NEPA within their discrete mission.<sup>10</sup> The CEQ can direct Federal agencies to develop categories of actions that, due to their typically low or nonexistent environmental impact, can be excluded from requirements from EIS and environmental assessments.<sup>11</sup>

Although provisions exist to exempt or exclude certain actions from the requirements of NEPA, they do not waive requirements of other Federal statutes and only rarely apply to private owners

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<sup>7</sup> Dep't. Homeland Sec., *National Infrastructure Protection Plan: Partnering to Enhance Protection and Resiliency* (2009), [www.dhs.gov/xlibrary/assets/NIPP\\_Plan.pdf](http://www.dhs.gov/xlibrary/assets/NIPP_Plan.pdf).

<sup>8</sup> 42 U.S.C. § 4332 (2) (C) (2011); 42 U.S.C. §4332 (C)(ii) (2011)

<sup>9</sup> Linda Luther, Cong. Research Serv., RL33152, *The National Environmental Policy Act: Background and Implementation* (Jan. 2008).

<sup>10</sup> *Id.* (for example, the Federal Emergency Management Agency's ("FEMA") regulations to implement NEPA are found at 44 C.F.R. § 10 *et seq.*)

<sup>11</sup> Linda Luther, Cong. Research Serv., RL33104, *NEPA and Hurricane Response, Recovery, and Rebuilding Efforts* (Mar. 2006) (environmental Assessments are generally required when it is unclear whether a certain project would have a significant environmental impact that would require and EIS.).

of critical infrastructure. The current regulatory web and widespread confusion at the State and local level about how to comply with them has and will continue to cause delays in the restoration of critical systems like power grids, water treatment facilities, and fuel services after a major event or disaster.

## II. *Exceptions to NEPA Requirements*

When a Federal agency is responding to an emergency or disaster, select provisions of the Stafford Act exempt certain activities from NEPA requirements.<sup>12</sup> However, these provisions are categorically limited by their requirements and do not grant a general authority to waive EIS requirements in response to a disaster. Section 301 of the Stafford Act provides:

Any Federal agency charged with the administration of a Federal assistance program may, if so requested by the Applicant State or local authorities, modify or waive, for a major disaster, such administrative conditions for assistance as would otherwise prevent the giving of assistance under such programs if the inability to meet such conditions is a result of the major disaster.<sup>13</sup>

Further, certain actions taken in response to a disaster or emergency are excluded from NEPA by section 316 of the Stafford Act.<sup>14</sup> Those actions include (1) providing specific Federal resources or assistance essential to reacting to immediate threats to life and property resulting from a major disaster,<sup>15</sup> (2) repair, restoration, and replacement to pre-disaster condition of public facilities or certain private nonprofit facilities damaged or destroyed by a major disaster,<sup>16</sup> and (3) debris removal from public or private land following a major disaster.<sup>17</sup> However, it must be noted that statutory exclusion from NEPA by a provision of the Stafford Act does not exempt that action from requirements of other environmental statutes or applicable local and State laws or regulations governing health, safety, and the environment.<sup>18</sup> That means FEMA, or any other DHS entity with a response mission, must also have a plan in place to address these potential challenges.

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<sup>12</sup> *Id.* at 3.

<sup>13</sup> 42 U.S.C. § 5141 (2011).

<sup>14</sup> Robert T. Stafford Disaster Relief and Emergency Assistance Act, Pub. L. No. 93-288, § 316 (2007) (codified at 42 U.S.C. § 5159 (2011)).

<sup>15</sup> These actions are specified in the U.S. Code. *See* 42 U.S.C. §§ 5170a-5170b (2011).

<sup>16</sup> 42 U.S.C. § 5172 (2011) (this provision is further examined *infra*).

<sup>17</sup> 42 U.S.C. § 5173 (2011); 42 U.S.C. § 5173(b) (exercise of the authority granted therein is contingent upon “the affected State or local government first arranging an unconditional authorization for removal of such debris or wreckage from public and private property, and, in the case of removal of debris or wreckage from private property, agree[ing] to indemnify the Federal Government against any claim arising from such removal. These requirements will undoubtedly lengthen a part of the recovery process which takes long enough in and of itself.).

<sup>18</sup> Other potentially applicable Federal environmental statutes include the Clean Air Act and the Clean Water Act, both addressed *infra* as well as the Coastal Zone Management Act, the Coastal Barrier Resources Act, the Endangered Species Act, and the National Historic Preservation Act. *See supra* CRS RL33104 at 3 n.4.

An example of a Federal statute that could be helpful to private industry, but is burdensome as currently interpreted concerns “repair, restoration, and replacement of damaged facilities” after an event or disaster.<sup>19</sup> Under 42 U.S.C. § 5172, the President may make contributions to “a person that owns or operates a private nonprofit facility damaged or destroyed by a major disaster for the repair, restoration, reconstruction, or replacement of the facility and for associated expenses incurred by the person.”<sup>20</sup> Such contributions may be made only where the facility “provided critical services (as defined by the President)”<sup>21</sup> and then, only where “the owner or operator of the facility has applied for a disaster loan” and has either been determined to be ineligible for that loan or “has obtained such a loan in the maximum amount for which the Small Business Administration determines the facility is eligible.”<sup>22</sup> The time required to meet the eligibility requirements for such contributions could be devastating in the event of a disaster, particularly if the facility’s operations will likely be vital to the recovery of the damaged area.

Some agency officials have relied on the analogy of providing financial assistance to a large company like Pepco as a reason for not expediting this process. This reasoning simply does not hold. The provision refers to small businesses, community-based electric co-ops, heating oil suppliers, small to medium sized gasoline businesses and even restaurateurs for whom a small amount of quickly dispersed seed-money could mean the difference to restoring service and going out of business.

### *III. Alternative Arrangements to NEPA Compliance*

CEQ regulations provide for the possibility of “alternative arrangements” to comply with NEPA and the resultant regulations in the event of an emergency. 40 C.F.R. § 1506.11 states:

Where emergency circumstances make it necessary to take an action with significant environmental impact without observing the provisions of these regulations, the Federal agency taking the action should consult with the [CEQ] about alternative arrangements. Agencies and the Council will limit such arrangements to actions necessary to control the immediate impacts of the emergency. Other actions remain subject to NEPA review.<sup>23</sup>

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<sup>19</sup> 42 U.S.C. § 5172.

<sup>20</sup> 42 U.S.C. § 5172(a)(1)(B).

<sup>21</sup> 42 U.S.C. § 5172(a)(3)(B) (“Critical services” as used in the above statute includes “power, water (including water provided by an irrigation organization or facility), sewer, wastewater treatment, communications, education, and emergency medical care.”).

<sup>22</sup> 42 U.S.C. § 5172(a)(3)(A).

<sup>23</sup> 40 C.F.R. § 1506.11 (2011) (as of July 14, 2009, this provision had been invoked approximately forty one times); See Hon. Tim Pawlenty et al., *Framework for Dealing with Disasters and Related Interdependencies*, National

It must be noted that the July 2009 report by National Infrastructure Advisory Council (“NIAC”) entitled “Framework for Dealing with Disasters and Related Interdependencies” states that this provision has an “uncertain legal basis” and “has not yet withstood a direct legal challenge.”<sup>24</sup> Even if the “alternative arrangements” provision was deemed sufficient to provide for rapid and unencumbered recovery following a disaster, some type of amendment would still be required to ensure the provision’s legality. In more than two years, none of the impacted DHS agencies have requested such a change to CEQ regulations.

#### IV. *Impediments Related to the Clean Water Act*

Discharge of pollutants to U.S. waters is generally regulated by permits issued under the Clean Water Act (“CWA”).<sup>25</sup> Permit requirements like this can be exceptionally damaging to a recovery effort necessary in the aftermath of a major disaster like Hurricane Katrina. These CWA permits are issued by States or the EPA under the Environmental Protection Act’s National Pollutant Discharge Elimination System (“NPDES”) program. Like the Clean Air Act (CAA)<sup>26</sup>, the CWA has civil and criminal penalty provisions and in some instances, allows for citizen suits for enforcement of specific provisions.<sup>27</sup>

One “exception” to the requirement of a NPDES permit available to municipal or industrial facilities is the recognition of an “upset.”<sup>28</sup> 40 C.F.R. § 122.41(n) defines “upset” as “an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee.”<sup>29</sup> The same section expressly states that “[a]n upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.”<sup>30</sup> Further, the permittee is required to report “noncompliance which may endanger health or the environment” orally within twenty-four hours of becoming aware of the noncompliance and in writing within five days.<sup>31</sup> In the aftermath of a major disaster it is

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Infrastructure Advisory Council, (July 14, 2009),

[http://www.dhs.gov/xlibrary/assets/niac/niac\\_framework\\_dealing\\_with\\_disasters.pdf](http://www.dhs.gov/xlibrary/assets/niac/niac_framework_dealing_with_disasters.pdf).

<sup>24</sup> *Pawlenty et al.*, *supra* at 22 (citing *Winter v. Natural Resources Defense Council, Inc.*, 555 U.S. 7 (2008)).

<sup>25</sup> 33 U.S.C. §§ 1251 – 1387 (2011).

<sup>26</sup> 42 U.S.C. §7401 et seq. (2011).

<sup>27</sup> *See* 33 U.S.C. §§ 1319, 1365 (2011).

<sup>28</sup> Conditions Applicable to All Permits, 40 C.F.R. § 122.41(n) (2011).

<sup>29</sup> 40 C.F.R. § 122.41(n)(1).

<sup>30</sup> *Id.*

<sup>31</sup> 40 C.F.R. § 122.41 (l)(6)(i); *See* Claudia Copeland and James McCarthy, Cong. Research Serv., RL33107, . . . *Emergency Waiver of EPA Regulations: Authorities and Legislative Proposals in the Aftermath of Hurricane Katrina* (Feb. 2006) (following Hurricane Katrina, the Louisiana Department of Environmental Quality issued an emergency declaration on September 3, 2005 that, among other things, “advised permittees about activating the

unlikely that a permittee will be able to immediately determine whether technology based noncompliance is caused directly by the “exceptional incident” or by one of the excluded causes listed above and merely exacerbated by such an “exceptional incident.”

That distinction might sound semantic were the “upset” a traditional exception to the permit requirements of the NPDES; it is not. “An upset constitutes an *affirmative (criminal) defense* to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph (n) (3) of this section are met.”<sup>32</sup>

Discharges excluded from NPDES permit requirements, but not other applicable requirements, are found in 40 C.F.R. §122.3.<sup>33</sup> One such exclusion used in New Orleans in the aftermath of Hurricane Katrina states that “[t]he following discharges do not require NPDES permits: (d) Any discharge in compliance with the instructions of an On–Scene Coordinator pursuant to 40 CFR Part 300 . . . or 33 CFR 153.10(e). . . .”<sup>34</sup> While this and other exceptions may prove workable in some cases, it is not hard to envision a situation in which an “On-Scene Coordinator” is unavailable following a major event and private owners of critical infrastructure are again forced to place concern for liability on one side of the scale and public safety and recovery on the other.

## FEMA

FEMA has complied with NEPA and CEQ requirements that Federal agencies promulgate their own EIS regulations. However, FEMA’s provision involving emergencies is short and constricted. Found at 44 C.F.R. § 10.13, the section states:

In the event of an emergency, the Regional Administrator may be required to take immediate action with significant environmental impact. The Regional Administrator shall notify the Environmental Officer of the emergency action at the earliest possible time so that the Environmental Officer may consult with the Council on Environmental Quality. In no event shall any Regional Administrator

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upset provisions in state NPDES permits, with certain modifications of normal procedures, such as generally waiving the state’s requirement for notification of an upset within 24 hours of occurrence . . . ”).

<sup>32</sup> 40 C.F.R. §122.41(n)(2) (stating that “[n]o determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.”); *See also supra* CRS RL33104.

<sup>33</sup> At least one CRS report has pointed out that the “existing allowable exception in this case (found at 40 C.F.R. § 122.3(d)) involves flexibility already contemplated by EPA’s rules, *not* an express waiver of normal requirements.” (emphasis supplied). *See also* Congressional Research Service Report RS22253 (July 2012).

<sup>34</sup> C.F.R. §122.3(d) (2011); 40 C.F.R. pt. 300 (2011) (containing the National Oil and Hazardous Substances Pollution Contingency Plan); 33 C.F.R. 153.10(e) (governing “Pollution by Oil and Hazardous Substances”); *Id.*; *But see* National Environmental Advocates v. U.S. E.P.A., 537 F.3d 1006, 1021-22 (9th Cir. 2008) (holding a prior version of 40 C.F.R. § 122.3(a) invalid).

delay an emergency action necessary to the preservation of human life for the purpose of complying with the provision of this directive or the CEQ regulations.<sup>35</sup>

FEMA has not used this power to prioritize human life over environmental impact. While it has not required an EIS, it does collect extensive and comprehensive information from public entities seeking disaster assistance. The information is used to determine whether an assessment is needed, then that information is used to determine whether an EIS is needed. In some cases, applicants must submit 15-20 page documents with commentary on issues such as "climate change" and "environmental justice" in the midst of seeking funding to restore essential systems. If common sense and a sense of immediacy were to dictate over bureaucracy, State and local officials could be given an exemption from filing this information until a reasonable time after the disaster.

### **Disasters and Chlorine Transport Rules**

The Department of Transportation regulates the transport of chlorine by road, vessels on inland waterways and offshore as well as rail under its hazardous materials rules.<sup>36</sup> According to the Chlorine Institute's handbook for wastewater operators,<sup>37</sup> chlorine can be transported at no more than 125% by weight of water. Highway shipment can range from 9 to 22 tons, averaging 20 tons per shipment.<sup>38</sup> The problems begin with State rules that restrict chlorine transportation between checkpoints. The National Infrastructure Advisory Council found in a 2009 report that elevated security concerns can impede the transportation of chlorine needed for water treatment during an emergency.<sup>39</sup> This restriction has the potential to disrupt continuity of water services during an extended period of disaster recovery. Chlorine is vital to the Water Sector for treatment of water to meet regulation-required standards for potability and maintenance of water delivery systems.

DHS should collaborate with State and local governments to establish guidelines that will ensure emergency response plans address necessary chlorine transportation for water treatment during an emergency. Another option would be to work with the Department of Transportation to develop a waiver process or a framework to negotiate this issue with the States. The initial framework could be developed with disaster prone states in the Midwest and Gulf South.

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<sup>35</sup> 44 C.F.R. § 10.13 (2011).

<sup>36</sup> 49 C.F.R. 173.315(a)(2) (2011); 49 C.F.R. 173.314(c).

<sup>37</sup> The Chlorine Inst., Inc., *Pamphlet 155 Water and Wastewater Operators Chlorine Handbook* 11 (2d ed. 2008), <http://www.scribd.com/doc/52649007/20/TRANSPORTATION-OF-CHLORINE>.

<sup>38</sup> *Id.*

<sup>39</sup> Hon. Tim Pawlenty *et al.*, *Framework for Dealing with Disasters and Related Interdependencies, Final Report and Recommendations*, National Infrastructure Advisory Council, (July 14, 2009), [http://www.dhs.gov/xlibrary/assets/niac/niac\\_framework\\_dealing\\_with\\_disasters.pdf](http://www.dhs.gov/xlibrary/assets/niac/niac_framework_dealing_with_disasters.pdf).

## Fuel Availability and the Regulations That Make it Difficult

The Department of Homeland Security and the Environmental Protection Agency each has rules governing fuel mixtures that both overlap and inhibit the movement and storage of fuel. The EPA requires certain mixes of fuels in the retail market, particularly ethanol content. Gasoline and diesel mix requirements for tanker trucks and large vehicles caused delays in the delivery of food and medical supplies to Katrina and later Midwest flood victims. The reason: after evacuees depleted the supply at gas stations, private fuel suppliers had to look for scarce or difficult to obtain Federal and state authorized ethanol mixes before providing aid to disaster recovery.

The number and length of current fuel mix requirements make them too voluminous to include in their entirety in this report. The letters from the EPA to different States regarding waivers of those regulations with citations to the relevant provisions of the Code of Federal Regulations are appended to this report.<sup>40</sup>

Although not found in the C.F.R., one provision for a temporary waiver of controls or prohibitions regulating the use of fuel or fuel additives in Federal law is found in the CAA<sup>41</sup> at 42 U.S.C. 7545 (c)(4)(C). This provision first allows a state to prescribe and enforce fuel or fuel additive controls or prohibitions for purposes of motor vehicle emission control in such a vehicle or its engine if an implementation plan under 42 U.S.C. § 7410 for that state so provides.<sup>42</sup> The next section of that provision states that the “Administrator may temporarily waive a control or prohibition respecting the use of a fuel or fuel additive required or regulated by the EPA Administrator pursuant to [certain] subsection[s] . . . of this section or prescribed in an applicable implementation plan.”<sup>43</sup> To issue such a temporary waiver, the Administrator must first consult with and obtain the concurrence of the Secretary of Energy in certain, required determinations.<sup>44</sup>

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<sup>40</sup> Evntl. Prot. Agency, *Fuels Waivers Response to 2005 Hurricanes*, <http://www.epa.gov/compliance/katrina/waiver/index.html> (last visited July 15, 2012) (letters regarding waivers); See also 40 C.F.R. §§ 80.22, 80.29 (regulating two-fuel mixtures).

<sup>41</sup> Relevant provisions of the Clean Air Act are found at 42 U.S.C. § 7401 *et seq.*

<sup>42</sup> 42 U.S.C. § 7410 (c)(4)(C)(i) (2011).

<sup>43</sup> 42 U.S.C. § 7410 (c)(4)(C)(ii).

<sup>44</sup> *Id.* The Administrator after consultation with, and concurrence by, the Secretary of Energy, the Administrator must determine that:

“(I) extreme and unusual fuel or fuel additive supply circumstances exist in a State or region of the Nation which prevent the distribution of an adequate supply of the fuel or fuel additive to consumers; (II) such extreme and unusual fuel and fuel additive supply circumstances are the result of a natural disaster, an Act of God, a pipeline or refinery equipment failure, or another event that could not reasonably have been foreseen or prevented and not the lack of prudent planning on the part of the suppliers of the fuel or fuel additive to such State or region; and (III) it is in the public interest to grant the waiver (for example, when a waiver is necessary to meet projected temporary shortfalls in the supply of the fuel or fuel additive in a State or region of the Nation which cannot otherwise be compensated for).

42 U.S.C. § 7545 (c)(4)(C)(ii)(I-III) (emphasis added). Daunting is the fact that it is currently unclear whether a terrorist attack (be it cyber, kinetic, or otherwise), would qualify as “another event that could not reasonably have

This statute provides just one example of the complicated and lengthy processes required to waive some fuel mix requirements that could unnecessarily and dangerously inhibit recovery efforts in an affected area following a catastrophic disaster or attack.

While other issues complicated delivery, EPA did issue partial waivers for fuel mixtures within days of the storm. However, they were not comprehensive enough. The waivers were also in place for only two weeks, not enough time to transport fuel from areas far outside the disaster theater to make it in significant amounts.<sup>45</sup> EPA should engage DHS in an analysis of this system, a timeline for restoring it and the associated risks to come up with a proactive approach to granting waivers.

Another element of the fuel mixture debate is security concerns about terrorism and the possibility of a major explosion. DHS and the chemical, oil and gas industries are at odds about the classification of gasoline as a regulated chemical under the Chemical Facility Anti-Terrorism Standards (CFATS).<sup>46</sup> DHS would like to regulate gas stored in above ground liquid terminals under CFATS. The reasoning is the terminal presents a vapor cloud explosion risk that could cause significant human health consequences or loss of life.

Industry experts believe that DHS' position is not based in science arguing that above ground terminals present a *de minimis*, if any, vapor cloud explosion (VCE) risk. Further, this possibility is already covered in the EPA's Risk Management Program (RMP) rules. In developing CFATS security regulations, DHS generally followed the RMP rules covering accidental releases. With their inclusion of gasoline however, many in industry and the private sector believe that DHS unreasonably deviated from the RMP. Though an attack on a fuel facility would cause a fire, and may result in limited off-site consequences, the inclusion of gasoline storage terminals in the agency's identification of "highest risk" facilities is not supported by DHS' own evaluation nor does it rise to the level of widespread regional impact in many of the agency's worst-case scenario models for the most critical of the nation's critical infrastructure.

For its part, DHS has stated that a terrorist attack against a facility which stores gasoline in aboveground storage tanks could lead to an intentionally-planned butane vapor cloud explosion that could result in significant offsite human life or health consequences. Explosion modeling experts have challenged the agency's scenario as being contrary to the best available scientific evidence. As the debate continues, the real impact could be a small segment of the industry being subject to overlapping regulations. These regulations could not only slow response and recovery

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been foreseen or prevented and not the lack of prudent planning on the part of the suppliers of the fuel or fuel additive to such State or region.”

<sup>45</sup> In this case, the area hardest hit was a major refining and oil production region. Fuel shortages were created by virtue of this region being compromised. The waivers didn't take into account the significant challenges associated with restoring these systems.

<sup>46</sup> 6 C.F.R. pt. 27 (2011).

efforts after a natural disaster or terrorist attack, they may unintentionally create a target for attacks.

Because the distribution and storage of fuels is typically a more functional than profitable business area, an unintended second-order-effect of the agency's decision may be the industry's selling off of a number of terminals and consolidating fuel storage facilities, in order to optimize remaining "hubs" and cut costs due to regulatory obligations. If this occurs, the end result would be larger, more attractive targets in a system with less flexibility to adjust if impacted.

Another consideration is that terminals can be sold to any interest without restriction, meaning DHS would need to closely monitor these transactions with the Committee on Foreign Investment in the United States<sup>47</sup> to ensure they are not purchased by any undesirable interests. Taking this regulatory stance will raise the security risk of gasoline terminals as a target for terrorists in addition to potentially increasing the scarcity of gasoline during a major event.

### **Regulations that Threaten Grid Security and Resilience**

In addition to regulatory challenges, a key problem facing the Electric Sector is determining the government's role in establishing restoration priorities for the grid after an event. There are also divergent opinions about how or whether the government should be communicating with stakeholders. Some areas of industry would like to see government involvement in the communications aspect of response, conveying information to residents and organizations while allowing companies to focus on restoration.<sup>48</sup> Others have said they prefer for the government not to be involved. Power systems are complex, layered structures best understood and prioritized by engineering constraints and community needs.

Other concerns related to electricity focus on Clean Air Act emissions reduction regulations, which limit the types of fuels and pipeline access that can be used to support the electric grid. In the event of a natural disaster or terrorist attack, there would be a delay in restoring power while the requirements are sorted out. Further a disruption in the limited fuel supply would equate to a disruption in the power supply.<sup>49</sup>

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<sup>47</sup>U.S. Dept. of the Treasury, Comm. on Foreign Investment in the United States (CFIUS), <http://www.treasury.gov/resource-center/international/pages/committee-on-foreign-investment-in-us.aspx> (last visited July 15, 2012).

<sup>48</sup>Tim Pawlenty *et al.*, *Framework for Dealing with Disasters and Related Interdependencies, Final Report and Recommendations*, National Infrastructure Advisory Council, (July 14, 2009), [http://www.dhs.gov/xlibrary/assets/niac/niac\\_framework\\_dealing\\_with\\_disasters.pdf](http://www.dhs.gov/xlibrary/assets/niac/niac_framework_dealing_with_disasters.pdf).

<sup>49</sup>*Id.* at 14.

Four proposed EPA regulations could impact power availability and resilience.<sup>50</sup> According to the Institute for Energy Research, those are:

- Section 316 (h) of the Clean Water Act-Cooling Water Intake Structures
- Maximum Achievable Control Technology Standards (MACT) in Title 1 of the Clean Air Act
- Coal Combustion Residuals standards
- the Cross State Air Pollution Rule, which replaces the Clean Air Transport Rule

There is a timeline of roughly three years for the implementation or proposed implementation of these rules.<sup>51</sup> From the retail perspective, the combination of these rules and implementation costs will make it more expensive to use, furthering the concern that coal-fired power plants will have to shut down. Fewer could be built. The impact during event response will be slower restoration of power. Overall, there will be a tightening of the electricity market which will lead to higher costs and less supply, which will make the grid less reliable.

The North American Electricity Reliability Corporation (NERC) has expressed concerns about availability of supply from a bulk power perspective. In its 2011 Long-Term Reliability Assessment<sup>52</sup> NERC expressed serious concerns about the EPA rules' impact on bulk power system reliability. For unrelated reasons about 38 gigawatts of electric capacity will retire in the next three to five years. Another 36-59 gigawatts could come off line by 2018 depending on how the EPA rules are implemented.<sup>53</sup> Because it can take up to 18 months to install environmental equipment and make repairs to a coal fired power plant, that means there will be a year and a half or more of restricted capacity in the systems that account for most of our electric capacity.

For consumers and regional operators this means less capacity to surge during high demand winter and summer months. It also means a lessened ability to restore the grid and interconnected services after an event. While not yet confirmed to be a cause of the extended outages and slow restoration efforts after the July 2012 "Derecho"<sup>54</sup>; it is easy to see how this tightening of the electricity market could have contributed to the extended outages in DC, Maryland, Virginia and West Virginia.

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<sup>50</sup> Will EPA Regulations Jeopardize the U.S. Electric Grid? (Jan. 5, 2012).

<sup>51</sup> *Id.*

<sup>52</sup> North American Electric Reliability Corporation, *2011 Long-Term Reliability Assessment*, (Nov. 2011), [http://www.nerc.com/files/2011LTRA\\_Final.pdf](http://www.nerc.com/files/2011LTRA_Final.pdf).

<sup>53</sup> *Id.*

<sup>54</sup> National Weather Service Forecast Office Baltimore/Washington, *The Derecho of June 29, 2012*, [http://www.erh.noaa.gov/lwx/events/svrwx\\_20120629/](http://www.erh.noaa.gov/lwx/events/svrwx_20120629/). (last visited July 16, 2012).

## The Need for Information Sharing and Common Sense Security

The RMP was at the center of a more recent controversy involving a proposed EPA rule that would be an outright threat to security. The EPA Office of Emergency Management considered posting locations and other information about chemical facilities online. This was the typical practice prior to 9/11. Afterward, the government decided that posting chemical data relating to specific, regulated processes would pose a national security risk. The information was removed from the Web after 9/11. The recent decision to reverse this policy was based on a desire to comply with the Freedom of Information Act and address concerns from various environmental groups. While those concerns are valid, posting this information online would have been analogous to posting a road map for potential terrorists. After receiving letters from the Subcommittee on Cybersecurity, Infrastructure Protection, and Security Technologies, the agency decided to abandon the effort. At the core of the problem was EPA's failure to consult with DHS, the agency with jurisdiction over chemical facility security, before making the above decision.<sup>55</sup> In its response to the Subcommittee, the EPA acknowledged a need for such consultation before continuing with policies that impact chemical security.

This incident is symptomatic of an ongoing information sharing challenge from other parts of the government and within DHS. It was noted in the 9/11 Commission report<sup>56</sup> that information sharing failures were the main aggravating factor to the response and what crippled any viable prevention efforts. Later updates and briefings related to the report have noted the same problems persist. In response to the report, DHS developed a strategy to address the commission's concerns, but it is still lacking *vis a vis* the "all-hazards" approach begun by FEMA and the resilience requirements under PPD-8. In its information sharing strategy, DHS made a vague effort to prepare in a list it calls its " five guiding principles" on information sharing:<sup>57</sup>

1. Fostering information sharing is a core Department mission.
2. The Department must use the established governance structure to make decisions regarding information sharing issues.
3. The Department must commit sufficient resources to information sharing.
4. The Department must measure progress toward information sharing goals.

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<sup>55</sup> *Subcommittee on Cybersecurity, Infrastructure Protection and Security Technologies, letter from Chairman Daniel E. Lungren to EPA Administrator Lisa Jackson February 16, 2012. Draft of letter and EPA response attached.*

<sup>56</sup> *See Final Report of the National Commission on Terrorist Attacks Upon the United States* at 146 ("The biggest impediment to all-source analysis – to a greater likelihood of connecting the dots – is the human or systemic resistance to sharing information.").

<sup>57</sup> *Dept. of Homeland Sec. Information Sharing Strategy*, [http://www.dhs.gov/files/publications/gc\\_1212068752872.shtm](http://www.dhs.gov/files/publications/gc_1212068752872.shtm) (last viewed June 20, 2012).

5. The Department must maintain information and data security and protect privacy and civil liberties.

In the full nine-page Presidential policy directive on information sharing, the principles are expanded upon as they relate to State, local and international partners in great detail. While the need to effectively share information with Federal partners is included in the report, it is heavily focused on the intelligence and law enforcement communities, mainly as a result of lessons learned from September 11<sup>th</sup>. For example in the first principle, terrorism and homeland security are mentioned as areas of focus. Natural and technological disasters are not. It is unclear how this strategy would apply during a major hurricane, wildfire or *Deepwater Horizon* type of event. DHS should review this information sharing framework in light of PPD-8 and its “all-hazards” framework to ensure it appropriately reflects this approach. The needs of the law enforcement, intelligence, emergency management and first-responder communities and other stakeholders must be taken into account. Robust stakeholder consultations and input is key to this “all-hazards” or “whole community” platform’s success.

### **The “All-Hazards” Approach and Presidential Policy Directive 8**

After over a decade of critical infrastructure protection work, discussing information sharing challenges since September 11th and nearly seven years of FEMA reforms since Hurricane Katrina, we still are left with coordination problems within DHS Leadership. FEMA's "all-hazards" approach is a step in the right direction when it comes to common sense thinking and creative leadership. However, the agency still struggles with being proficient at its response mission and not discerning between preparedness, mitigation and recovery.

When it comes to viewing infrastructure as systems that support people, their thinking has not evolved. Further, when required to view the impacts of regulations in an active disaster theater rather than in "steady state" mode, none of DHS' entities has shown proficiency.

Stakeholders are left with a Presidential Policy Directive (PPD-8) that focuses on operationalizing resilience without a clear meaning of the term and an expansion of operational thinking without comprehensive and well-defined regulatory underpinnings. Fulfilling the terms of PPD-8 will require that DHS not only have awareness of its own regulations, but coordinate and share information with the Environmental Protection Agency, Department of Transportation, Department of Energy, the Federal Energy Regulatory Commission and the Department of Commerce to name a few. FEMA and the National Protection and Programs Directorate's Office of Infrastructure Protection will also have to share roles and responsibilities. This lack of progress and imagination threatens our security and ability to bounce back after a catastrophic event.

## **Examples of Success: Frameworks DHS Could Emulate**

Immediately following a disaster, one of the top priorities during the response efforts is to restore critical life sustaining utilities, such as water, electric, and gas. Many organizations within the Critical Infrastructure sectors have implemented policies and procedures to ensure a timely restoration of utilities after a disaster. However, these proactive measures have not been adequately tested prior to a real life incident and could have the potential of causing issues during response missions.

Incorporating regulatory challenges into a comprehensive policy review or exercise is not impossible. While the Federal government has not fully addressed the importance of infrastructure interdependency during disaster response into one of the full-scale national exercises, State and local governments, the private sector, and non-governmental organizations have been collaborating, on a smaller scale, to test current Critical Infrastructure interdependency policies. Several of the After Action reports that have been released in relation to these smaller scale exercises contain valuable recommendations that should not just be integrated into Regional and industry policies, but should be considered best practices for national disaster response efforts.

For example, NERC conducted an exercise to determine the resiliency level of the bulk power systems after the 2010 snowstorms in which it identified regulatory and interstate policy challenges to resilience. The Pacific Northwest Economic Region, composed of five Pacific Northwest States and five Canadian Provinces, has conducted a series of regional stakeholder-designed tabletop exercises, know as the *Blue Cascades* exercise series, for years. In addition to analyzing the impacts of various threats, the exercises take into account economic and regulatory challenges, discussed further below.

The Pacific Northwest Economic Region since 2002 has identified a significant number of priority issues along these lines through the *Blue Cascades* series, as well as dozens of workshops and other events. In addition to analyzing the impacts of various threats, the exercises and other activities take into account economic and regulatory challenges to preparedness and effective and expeditious response and recovery.

These challenges and gaps with improvement recommendations have been incorporated into a holistic disaster resilience strategy — the *Comprehensive Community Bio-Event Resilience (CCBER) Action Plan*. Highlighted in the CCBER Action Plan are a wide array of legal, liability, and economic resilience issues that affect preparedness, response and recovery and mitigation associated with impacts from incidents and disasters. These issues include:

- Economic issues raised include the need for disaster assistance for private sector organizations and non-profits, including technical expertise and other resources for recovery; avenues for local jurisdictions and private sector organizations to secure funds for pre-event mitigation activities in the case of high-probability, high-consequence threats; a disaster assistance mechanism with procedures to enable the collection of funds from non-government sources, including private donations that can provide vetted, appropriate distribution to businesses that suffer either direct or indirect harm from incidents or disasters; and ways in which government assistance programs for the private sector could be expanded beyond Small Business Administration funding.
- Additional related key resilience needs identified include a model regional organizational structure for recovery and long-term restoration after a major event that involves key stakeholder organizations necessary to make informed decisions; regional consequence assessments of impacts to interdependent critical infrastructures and essential services based on likely scenarios to more accurately gauge evacuation and other response requirements, recovery and restoration needs; and incentives and rewards to keep small businesses operating and encourage them to return to the region if they have left.<sup>58</sup>

The San Francisco Bay Area Regional Disaster Resilience Initiative, focusing on disaster recovery and modeled on the PNWER approach, has also identified many of the same challenges and needs in a series of three regional stakeholder workshops held in the past year. One of the key findings in the last of the three workshops on interdependencies among providers of essential goods and services was that most of these organizations are subject to regulatory requirements that may help or hinder post-disaster capabilities to resume business, including legal requirements, policies and standards that govern operations, health and safety, privacy, emergency preparedness, etc. Additional regulatory constraints raised by several utilities and organizations in the earlier workshops were the time limits on testing power generators to meet air quality standards and transportation restrictions that hindered timely restoration.<sup>59</sup>

The Infrastructure Security Partnership (TISP) *Guide for Developing A Regional Disaster Resilience Action Plan 2011 Edition*, which was developed with a broad national task force of practitioners and experts, holistically documents and validates the needs identified in the preceding case studies and calls for evaluation and revision of existing or development of new

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<sup>58</sup> See Pacific North West Economic Region, *Comprehensive Community Bio-Event Resilience Action Plan for the Puget Sound Region*, sec. 6.4, 6.5, 6.9, 6.12 (Sep. 2010), <http://pnwer.dataweb.com/tables/Articles/files/File/CCBER%20Action%20Plan%20Print%20Version.pdf>.

<sup>59</sup> See summary reports for Building a Resilient Bay Area Initiative Kick-Off Workshop: Focus on Housing Issues, Recovery Decision-making and Economic Resilience (held November 1, 2011); Interdependencies Workshop I: Focus on Utilities, Communication Systems and Transportation (held January 31, 2012); Workshop II: Focus on Providers of Essential Goods and Services (held May 2, 2012).

policies and procedures to address legal and liability constraints that adversely affect regional disaster resilience.<sup>60</sup>

## Conclusions and Recommendations

- DHS should expand its planned "Preliminary Plan for Retrospective Review of Existing Regulations," which is currently limited to a few regulatory frameworks and mainly consists of cost-benefit analyses, to include an analysis of how DHS regulations and those that impact DHS operations functions in an event response theater.
- DHS should develop and see through to maturity a framework for exchanging best practices with State and local governments. This could be based on the Regional Resilience Assessment Programs, with a focus on regulatory challenges.
- DHS must work with the agencies that share jurisdiction, particularly the Environmental Protection Agency, over its security and emergency management and response missions to develop memoranda of understanding and regulatory waivers where needed to ensure efficient and expedient operations during the various phases of event response.
- DHS must develop a flexible, and robust information sharing mechanism between agencies of jurisdiction and State and local governments to ensure that the focal issues of event response are communicated and possible confusion over regulatory issues are avoided.
- DHS should improve its interaction with the private sector and state, tribal and local governments, working with national and regional coalitions and partnerships, which are inclusive of citizens, companies and agencies within a specified boundary or subject. Also clarifying that the Federal government needs to be a role model in terms of interdepartmental coordination before all the other coordination silo issues can be effectively solved.
- DHS-FEMA should review Section 406 of the Stafford Act to determine whether there is room to be more flexible in providing financial assistance to owners and operators of critical infrastructure.
  - A similar review of the other provisions of the Stafford Act ought to be done to determine whether it should be amended to allow the Administrator the ability to require waivers for certain response and recovery activities currently restricted by Federal regulations.

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<sup>60</sup> Infrastructure Sec. P'ship., *Regional Disaster Resilience A Guide for Developing an Action Plan*, 50 (2011 ed.), [http://www.tisp.org/tisp/file/Template\\_TISP%20Layout\\_v29%282%29.pdf](http://www.tisp.org/tisp/file/Template_TISP%20Layout_v29%282%29.pdf).

- The same should be done for the Homeland Security Act of 2002 Sections 507 and 508 to identify where DHS-FEMA might clarify its role as the Federal coordinating agency under Presidential Policy Directive-8.

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