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Need for Nuclear Liability Insurance

This paper addresses U.S. nuclear liability exposures from the perspective of suppliers providing products or services to the nuclear industry. It reviews what potential exposures these suppliers have, and whether they should consider purchasing nuclear liability insurance.

The Price-Anderson Act

Any discussion of nuclear liability in the United States should begin with the Price-Anderson Act (the Act). The Act, which is Section 170 of the Atomic Energy Act of 1954, was first enacted in 1957. Price-Anderson has been renewed four times since then, in 1967, 1977, 1987 and 2005. The Act currently is in force until the end of 2025.

The intent of Price-Anderson is two-fold:

- To provide compensation to the public in the event of a nuclear incident.
- To limit the potential liability of companies involved in certain nuclear activities, and by doing so to encourage the commercial use of nuclear energy.

In return for the limit on liability, Price-Anderson requires certain nuclear facilities to maintain what the Act calls “financial protection.” Financial protection is defined as “the ability to respond in damages for public liability and to meet the costs of investigating and defending claims and settling suits for such damages.”

Price-Anderson also authorizes the Nuclear Regulatory Commission (NRC) or Department of Energy (DOE) to indemnify nuclear facilities for damages that exceed any required financial protection. The sum of financial protection and indemnity is the limitation on liability described above.

An important feature of Price-Anderson is that it imposes economic channeling of liability to the nuclear facility owner or operator. Suppliers to nuclear facilities subject to Price-Anderson can be legally liable for damages. But financial responsibility for any liability is channeled to the facility operator, and to the financial protection and/or government indemnity that the operator maintains.

All nuclear facilities required to maintain financial protection currently do so by purchasing nuclear liability insurance from American Nuclear Insurers (ANI). But what about facilities not subject to Price-Anderson? From an insurance perspective, it’s convenient to distinguish between sales to power reactor facilities and sales to other nuclear facilities. If products or services are provided only to power reactors, a supplier likely will not need their own nuclear liability insurance.

But if products or services are provided to other nuclear facilities, a supplier might want their own insurance.

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Sales to Power Reactor Facilities

If the products or services are used at commercial power reactor installations in the United States, the supplier is insured under the nuclear liability Facility Form policy written by ANI and purchased by the facility owner/operator. The NRC accepts the Facility Form policy as acceptable financial protection required under Price-Anderson.

The definition of insured under the Facility Form policy is quite broad, and includes:

- a. The named insured (usually the facility owner/operator) and,
- b. any other person or organization with respect to their legal responsibility for damages because of bodily injury, property damage or environmental damage caused by the “nuclear energy hazard,” which is defined as “the radioactive, toxic, explosive or other hazardous properties of nuclear material.” Nuclear material includes source, special nuclear and byproduct material.

Only the U.S. government and its agencies are excluded from this omnibus definition of insured.

Although the reactor operator may elect not to purchase a Facility Form policy, the operator must still maintain financial protection under the Act. Regardless of what method is employed in maintaining financial protection, the protection must be comparable to that found under the Facility Form policy. As mentioned, all operating power reactors have satisfied their financial protection requirements by purchasing liability insurance from ANI.

The limit of liability under the Facility Form policy issued to operating power reactor installations is, in almost all cases, equivalent to the maximum insurance capacity available from ANI. That capacity now is \$450 million, and is available to all operating power reactors.

Under Price-Anderson, power reactor operators required to maintain the maximum level of financial protection are also required to participate in a Secondary Financial Protection program managed by ANI. Under this program, should an accident at **any** participating power reactor result in injury or damage in excess of the \$450 million layer, all power reactor operators will be charged a retrospective premium, up to a maximum of \$137,608,800 per reactor per incident. The retrospective premium is subject to inflation adjustment every five years, based upon changes in the Consumer Price Index.

There currently are 95 power reactors that participate in the Secondary Financial Protection program, creating a combined level of protection under both the primary and secondary layers of approximately \$13.5 billion. The protection afforded under the Secondary Financial Protection layer for suppliers of products or services is the same as that afforded under the primary layer.

These two layers of financial protection also apply for transportation of nuclear material to or from power reactor facilities.

The Facility Form policy provides what is called “insured shipment” coverage, and the same omnibus definition of insured applies for this coverage. Thus, a transporter automatically is insured for

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shipments of source material, special nuclear material, spent fuel or waste to or from a power reactor facility.

The two layers of financial protection comprise the limitation on liability authorized under Price-Anderson. That limit is equal to the combined total of the primary and secondary financial protection. No one, owner/operator or supplier, can be held liable for damages in excess of this amount. Price-Anderson does include a specific provision that, if damages exceed the limit on liability, Congress is obligated to take appropriate action to assure full compensation for all unresolved public liability claims.

Sales to other Nuclear Facilities

If the supplier's products or services are sold to nuclear facilities other than commercial power installations, the situation is a bit more complicated.

If products or services are furnished to the **Department of Energy (DOE)** in connection with their national nuclear installations, there should be government indemnity offered on an omnibus, first-dollar basis in the amount of \$10 billion (also subject to periodic adjustment for inflation), at which point the ceiling on liability applies. Since there may be exceptions, the presence or absence of indemnity should be verified either with the prime contractor or directly with DOE.

For **private research reactors** (other than university reactors), the required financial protection is at an amount determined by the NRC. Government indemnity of up to \$500 million is provided above that financial protection, and the two amounts again comprise the limitation on liability. These reactors do not participate in the Secondary Financial Protection program.

For **non-profit university reactors**, there is no financial protection requirement. Government indemnity of up to \$500 million applies in excess of a \$250,000 retention. The university may or may not choose to purchase a nuclear liability policy to insure the retention.

Nuclear fuel fabricators licensed to possess up to 5 kilograms or to process up to 1 kilogram of plutonium are required to maintain financial protection of \$200 million, and are eligible for government indemnity of up to \$360 million above that amount. They also do not participate in the Secondary Financial Protection program. (There currently are no commercial plutonium fuel fabricators.)

Finally, **commercial uranium enrichment** facilities are not subject to Price-Anderson, and are not required to maintain financial protection. But they are required to maintain liability insurance in such type and amount as are acceptable to the NRC.

The Supplier's and Transporter's Policy

So when does a supplier need their own nuclear liability insurance? For nuclear installations where Price-Anderson financial protection or indemnity does not apply, any Facility Form policy purchased will provide omnibus insured coverage for a supplier. But the limit of liability for these locations, and

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indeed the decision whether to purchase Facility Form insurance, can be at the discretion of the facility operator. It is for these situations that the supplier might want their own protection.

If so, the ANI Supplier's and Transporter's (S&T) policy can provide coverage for a supplier's liability arising out of their products or services to another's nuclear facility.

The policy normally will respond as excess insurance above some other Facility Form policy that is in place. Most operating nuclear facilities do maintain their own insurance. If a Facility Form policy has a limit less than \$450 million, and many do, an S&T policy can apply excess of the Facility Form limit. However, there is an aggregate of \$450 million for any one occurrence, regardless of the combined policy limits. \$450 million is the maximum that ANI will pay under all applicable nuclear liability policies.

If there is no Facility Form policy in place, the S&T policy can respond as primary insurance. The maximum limit available under an S&T policy, other than S&T policies for operating power reactors, is currently \$25 million. The maximum limit available under an S&T policy for operating power reactors is \$450 million.

Many suppliers buy S&T policies, even though their nuclear exposures are limited to power reactors or to other Price-Anderson facilities. The decision whether to buy really depends upon how risk averse a company's risk management philosophy is. Many companies accept the economic channeling provisions of Price-Anderson, and see no need to purchase their own nuclear liability insurance. Others do buy the policy, despite the fact that the policy might very well never apply.

The S&T policy is a pay on behalf of policy, and covers third-party bodily injury, property damage or environmental damage resulting from the "nuclear energy hazard," which as in the Facility Form policy is defined as "the radioactive, toxic, explosive or other hazardous properties of nuclear material." The policy is continuous from inception until cancellation or termination, at which point an insured has ten years to report claims for damages that took place during the policy period. The policy is an occurrence policy with a ten-year discovery period or tail.

Policy premiums are based upon the product or service provided, the facilities where that product or service is provided, and the limit of liability. Assume, for instance, that a supplier provides \$5 million annually in primary side consulting services to power reactors. Estimated annual premiums would be \$18,000 for a limit of \$10 million, or \$30,000 for a limit of \$25 million.

Or assume that a common carrier trucking firm hauls nuclear fuel assemblies from fuel manufacturing facilities to power reactors. The carrier has annual gross receipts of \$25,000,000. Estimated annual premiums here would be \$9,000 for a limit of \$10 million, or \$22,000 for a limit of \$25 million.

Roughly 70 to 75% of every premium dollar goes into a reserve fund to pay claims and claim expenses. After ten years, and depending upon the incurred loss experience of all insureds that contribute to the fund, a portion of the reserve premium normally is returned to policyholders.

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An important point is that ANI's nuclear liability policies only apply to the nuclear energy hazard as defined. A supplier should maintain general, automobile and professional liability insurance for their non-nuclear exposures at nuclear facilities.

It also is important to note that nuclear liability policies specifically exclude property damage (including business interruption and loss of use) to the nuclear facility itself. Neither the Facility Form nor the S&T policy can be purchased to afford property damage protection to a supplier at a nuclear facility where that supplier has furnished products or services. To cover that exposure, a normal recourse is contractual risk transfer, because the standard nuclear exclusion in conventional liability policies also excludes nuclear property damage to a nuclear facility.

Most nuclear facilities maintain their own property insurance. The NRC, in fact, requires power reactors to purchase property insurance at minimum limits of \$1.06 billion. Suppliers routinely can be added as named insureds under a nuclear property policy. And typical nuclear property policies contain an automatic waiver of subrogation with respect to a supplier's liability for damages arising out of an insured loss.

All of this provides some protection to a supplier. But a supplier is covered only for their insurable interest, which normally does not encompass property other than their own. Too, property policies usually contain deductibles, which at power reactor facilities typically are \$1 million and higher. Property policies might also exclude certain property at a location, and might not include business interruption and loss of use. Finally, the insurable values at a facility might exceed the property insurance limit. All of these factors argue for contractual risk transfer, usually in the form of a hold harmless and indemnification agreement.

We welcome your questions or comments, so please feel free to contact us if any arise.

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