



Entergy®

PRESENTATION TO THE ALJ'S
PARTIES & THE PUBLIC ON NYSDEC
STAFF'S OUTAGE PROPOSAL

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Purpose of Entergy's Presentation

- **Entergy wanted to take the time to educate New York State Department of Environmental Conservation (“DEC”) Staff, this Tribunal and the public about a proposal that is a terrible idea for our environment, New Yorkers and Indian Point.**
 - › In November 2003, when DEC Staff issued its draft SPDES permit, Staff publicly rejected annual outages of 32 weeks as the “best technology available” (“BTA”) for Indian Point.
 - › Now, more than 10 years after DEC Staff choose Cooling Towers as BTA and as the BTA phase of the SPDES permit proceeding is winding down, Staff has reversed its position.
 - › Staff now want permanent, simultaneous outages at both units for 42, 62 or 92 days during May 10 to August 10, *every year*.
 - And since Staff question whether 42 and 62 days are enough, I think the fairest reading of Staff’s proposal is that it wants outages at both units for the 92 days – the full period from May 10 to August 10th.
 - This means, every year, Indian Point will not be generating electricity *during most of the summertime peak demand period*.

Purpose of Entergy's Presentation (Cont.)

- **My goal over the next few minutes is to briefly touch upon why simultaneous summertime outages at Indian Point should *not* be required, and how DEC Staff's proposal reflects:**
 - › A lack of understanding about how nuclear facilities, including Indian Point, operate.
 - › A lack of accountability for the serious impacts to electric system reliability and electricity pricing of simultaneous, summertime outages – that is, whether the lights will go on and the billions of dollars New Yorkers will pay to achieve that.
 - › A lack of perspective on the importance of protecting our environment as a whole. Nuclear Plant outages:
 - Reduce air quality, which affects human beings and animals alike.
 - Contribute to Climate Change effects felt not only in New York (as we learned with super-storm Sandy), but around the globe.
 - Will effect workers, their families and their communities.
 - › A lack of sensitivity to the economic climate in which businesses, like Indian Point, operate.

DEC Staff's Outage Proposal Is Not Consistent with Nuclear Facility Operational Norms

- **DEC Staff's Outages Proposal is unprecedented for a nuclear facility like Indian Point:**
 - › Indian Point is a baseload facility.
 - “Baseload” means that a facility reliably operates 24 hours a day, 365 days a year, except for scheduled maintenance outages of about a month per unit, every 24 months.
 - Nuclear facilities, like Indian Point, are designated *baseload* facilities based on their low cost generation, efficiency and safety at rated output power levels.
 - › Staff's outages are out-of-touch with the needs and realities of baseload nuclear facilities, such as Indian Point.
 - › In fact, the US nuclear fleet has inadequate history with this sort of operational scheme, which raises many red flags, none of which DEC Staff acknowledge, let alone resolve in their Proposal.

DEC Staff's Outage Proposal Is Not Consistent with Nuclear Facility Operational Norms (Cont.)

- These red flags are serious – and obvious – issues that should have been considered before DEC Staff made its proposal public:
 - › First, ramping up and down at nuclear facilities is not practicable on a short swing basis.
 - › Second, the logistical challenges to plan and implement *simultaneous*, summertime outages at Indian Point are real, significant and make the Staff's plan infeasible.
 - › Third, *unnecessary* fuel handling is not embraced by NRC or industry, but that is exactly what would occur under Staff's plan – *which double outages and require they occur more often and longer than they do now*.
 - › Fourth, DEC Staff ignores the needless exposure to radioisotopes that the Indian Point workforce that would need to occur to implement these outages. That matters to Entergy, and to workers and their families, but is unmentioned by DEC Staff.
 - › Fifth, particularly as outages grow longer, stagnant water in the circulating, condenser and electric-generating equipment and systems – what we call the “balance of plant” – represents a serious challenge.

DEC Staff's Outage Proposal Ignores Major Electric System Problems

- **Indian Point is *essential* to the New York State electric system. DEC Staff's plan presents serious consequences to that system, and as a result to the New York economy and each of us, as electricity consumers.**
 - › This is the conclusion of the New York Department of Public Service (“DPS”) Staff and the New York Independent System Operator – the two New York State entities charged with protecting electric system function and electricity affordability.
 - › Because baseload facilities operate reliably on a continuous, efficient and low cost basis, these facilities are the foundation of a sound electrical system, and the “work horses” of the grid.
 - As a result, any loss of a major baseload facility is cause for concern.
 - Loss of a baseload facility of the magnitude and importance of Indian Point – which provides on average 25% of the electricity used in New York City and Westchester County – calls for more than concern.
 - To sum up DPS's recent testimony to this Tribunal: Loss of Indian Point – as would occur as a result of Staff's plan – is a “big deal.”

DEC Staff's Outage Proposal Ignores Major Electric System Problems (Cont.)

- **What does DPS mean by a “big deal”?**
 - › In DPS's words, “If the plant's not on in the summer, we have a reliability problem. That's understood by everybody.”
 - › Outages at Indian Point also can compromise grid function, because Indian Point plays an important voltage support role to keep the system functional.
 - › Either of these situations can result in brownouts and blackouts.
 - Blackouts have profound, negative public safety and economic impacts.
 - By way of example, the Hudson Valley Hospital Center has submitted written comments to this Tribunal opposing outages at Indian Point.
 - As that Hospital– with its 1400 employees, 350 physicians and countless patients – pointed out, electricity failures can cost lives.
 - For this reason, the Hospital characterized Staff's outage proposal as creating a dynamic that is “unconscionable, avoidable and unnecessary.”

DEC Staff's Outage Proposal Ignores Major Electricity Pricing and Taxation Problems

- **When Indian Point is not operating, electricity prices climb – that is, electricity becomes more expensive for you and me.**
 - › According to DPS, Indian Point outages could cost consumers at least half a billion dollars in increased energy costs *every year*. And that's for only 42 or 62 days, not the 92 days DEC Staff also propose.
 - › This was proved out recently in California with the unplanned outage of SONGS Nuclear Station: It has caused all of Southern California to experience an *average* 12% price increase, compared to Northern California.
 - › The only practical way to try to hold down prices is to build new electric generating stations, but this rarely goes as planned. The reality is:
 - Major new facilities are hard to site in metropolitan areas, and invariably take longer to permit than anticipated, when and where they can be sited.
 - Even if sites can be found, power plants need to be financed, which means they need to have demonstrated revenue.
 - For this reason, DPS and New York City concluded that replacing Indian Point during outages will cost consumers billions of dollars in subsidies to power plants that otherwise cannot compete.

Indian Point is an undisputed, critical asset to New York's environmental mission

- **Nobody disputes that generating electricity at Indian Point prevents the emission of air pollutants, such as sulfur dioxide (SO₂), nitrogen oxides (NO_x) and greenhouse gases like carbon dioxide (CO₂).**
 - › Per DPS, outages could cause NOX and SOX emissions from power plants in New York City to increase by about 10%, and also add millions of tons per year of CO₂ to the atmosphere.
 - Emissions of SO₂ lead to the formation of acid rain.
 - Acid rain triggered Rachel Carson's landmark book, *Silent Spring*, and compromised Adirondack lakes – and the animals in them – for decades.
 - SO₂ emissions also can compromise human health.
 - SO₂ may not be on the front page as often as Climate Change, but it is no trivial matter, particularly here in New York.

Indian Point is an undisputed, critical asset to New York's environmental mission (Cont.)

- **NOx is a precursor of both ground-level ozone and smog.**
 - › The NYC metro area already exceeds National Ambient Air Quality Standards – human health standards – for ground level ozone.
 - › Outages will only make the situation – that is, the smog – worse.
 - › Ground level ozone is linked to asthma, particularly in children and the elderly. In other words, outages puts the most vulnerable New Yorkers at more risk of serious health consequences.

- **Greenhouse Gases exacerbate Climate Change.**
 - › Most of us lived through super-storm Sandy – including my family, which experienced Sandy at my family-owned business on Long Island.
 - › While Indian Point may have sailed through Sandy, many of us on the coast were not as fortunate.
 - › And we may be even less fortunate in the future, as metropolitan New York grapples with Climate Change and outages at Indian Point.

DEC Staff's Outage Proposal Is Not Consistent with Nuclear Facility Economic Realities

- **Nuclear facilities, like Indian Point, employ hundreds of skilled workers – 1,000 full time employees at Indian Point.**
 - › Taking away Indian Point's revenue dramatically undercuts the Station's economics.
 - Every business – including Entergy's business – depends on a viable economic profile: Nuclear facilities operate with baseload profiles because it is *the* viable one.
 - Staff's plan put that viability at risk, and with it the economic engine that Indian Point represents.
 - The Westchester County Business Council estimates 3,300 jobs are at risk.
 - The Utility Workers Union, the Hudson Valley Gateway Chamber of Commerce and the Hispanic Chamber of Commerce – collectively representing almost 9,000 members – all reviewed Staff's plan and filed comments opposing it.

To Sum Up

- **Now, perhaps, all of these impacts might be worth considering if outages at Indian Point were actually necessary to protect fish eggs and larvae.**
 - › But, outages are not necessary, for two reasons:
 - There is no credible science that Indian Point damages fish populations, or that DEC Staff's plan will result in more fish in the River.
 - Even if there were, Entergy has proposed Cylindrical Wedgewire Screens ("CWWS"). This technology has none of the negative impact of outages.
 - Further, CWWS reduce entrainment and impingement of fish eggs and larvae in a manner comparable to 92-day outages.
 - › So, the time has come to focus on the right – *the best* – technology.
 - › And, respectfully, that is not forcing Indian Point to shut down every summer – which is not even a technology at all.
 - › The *best* technology – for Indian Point, New Yorkers and the environment – is CWWS.