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NY Prize for Grid Resilience

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NYSERDA

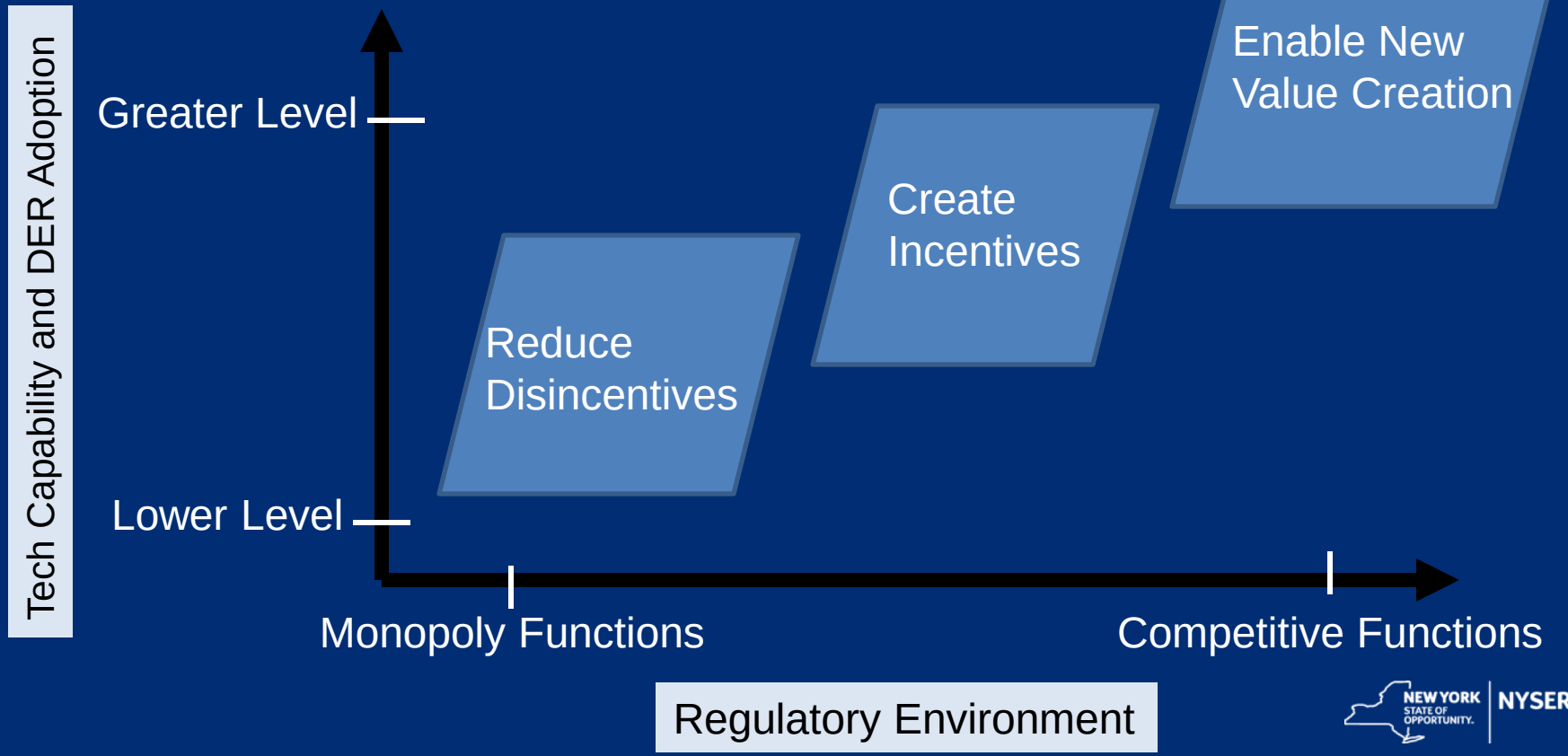
Agenda

I. REV /NY Context
II. Community Anchors
III. Microgrid Benefits
IV. NY Prize Mechanics
V. Market animation
VI. Q & A

Reforming the Energy Vision

New York's comprehensive strategy to enable self-sustaining clean energy markets supporting a cleaner, more reliable, and affordable energy system.

Landscape Evolution



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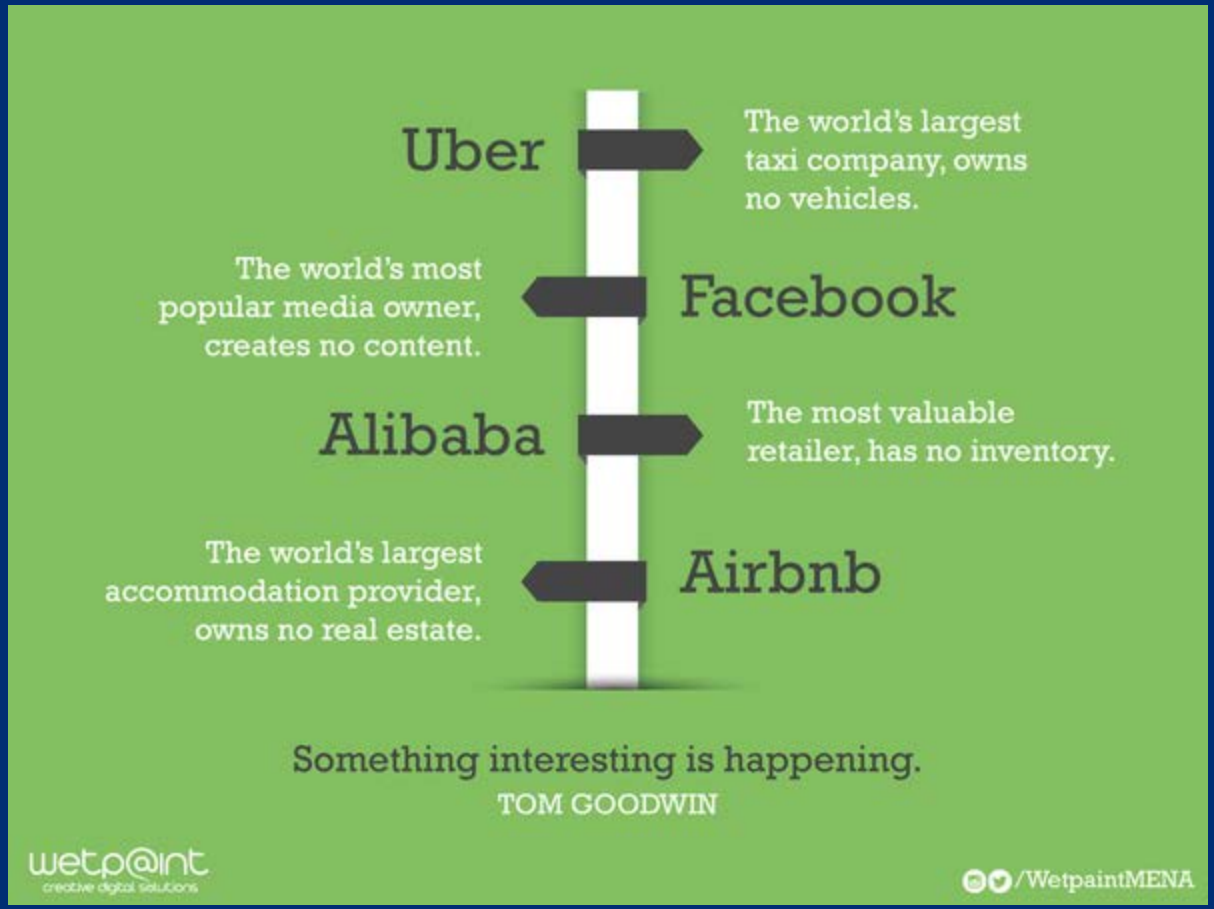
Uber
The world's largest taxi company, owns no vehicles.
The world's most popular media owner, creates no content.
Facebook
Alibaba
The most valuable retailer, has no inventory.
The world's largest accommodation provider, owns no real estate.
Airbnb
Something interesting is happening.
TOM GOODWIN
wetpaint
creative digital solutions
/WetpaintMENA

New York is the birthplace of the modern electric grid

“We were all part of a majestic endeavor and we were making history happen.” – Tom Kelly

What's Different Now?

- Sense of urgency
- Extreme weather events
- Aging infrastructure
- Increased energy demand

Extreme Weather – The New Normal

Power outages cost New Yorkers $9 billion/year

New Yorkers pay the highest average residential electric rates in the continental U.S.,

2X the national average

No Grid Resilience without Community Resilience

New Paltz Times

NEWS OF NEW PALTZ, HIGHLAND, GARDINER, ROSENDALE & BEYOND

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NEW PALTZ TOWN GOVERNMENT

New Paltz town, village agree to move forward on water/sewer infrastructure, Comprehensive Plan and microgrid proposal

by FRANCES MARION PLATT on Mar 5, 2015 - 5:00 pm

No Comments

"At no time in recent memory have the leaders of the two municipalities demonstrated such willingness to set aside incompatibilities of personal style, roll up their sleeves and get to work on common challenges as they did at the joint board meeting held on February 26."

- New Paltz Times

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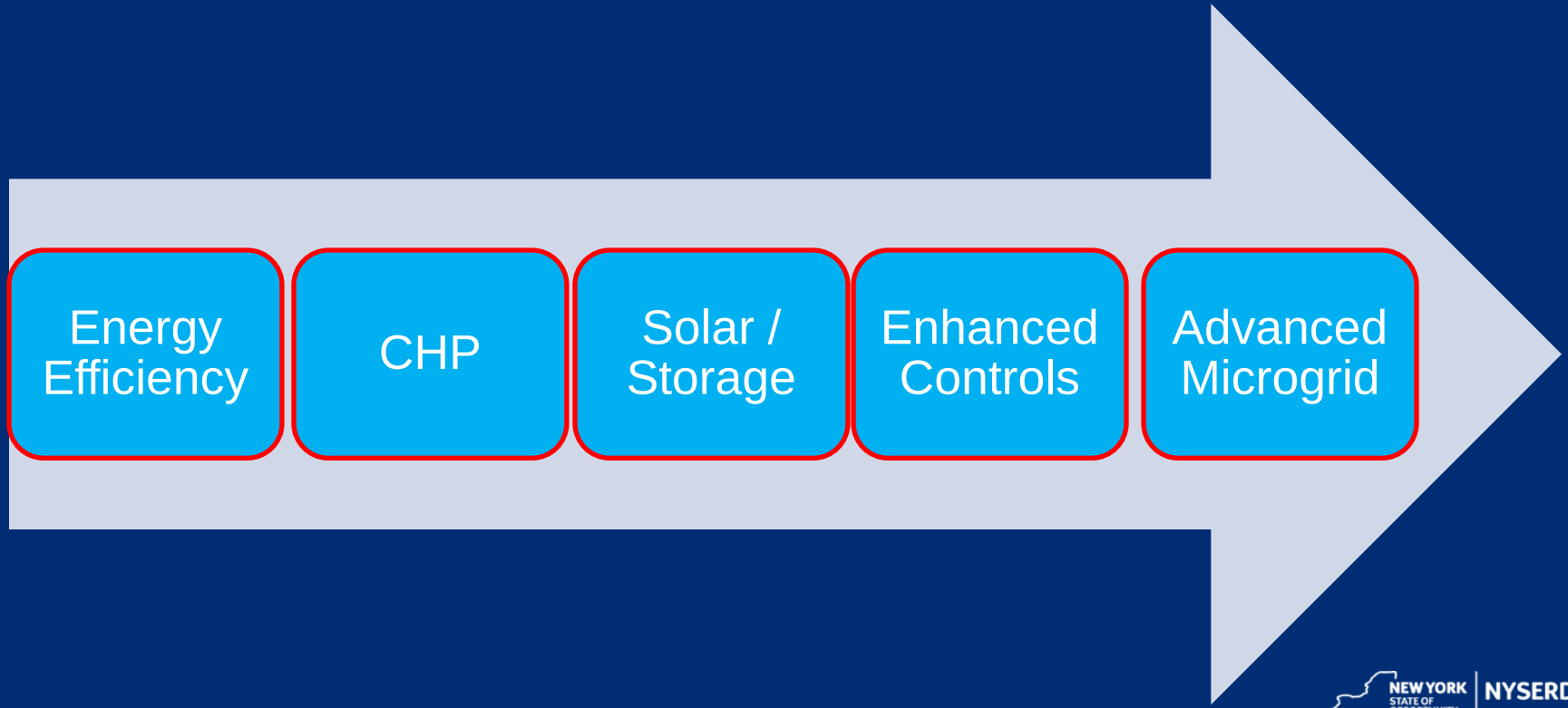
Communities –Utilities - Developers

Evolution of Resilience Investments



NYSERDA Microgrid Study Benefits

Economic

Direct

- Energy cost reductions
  - Reduced purchases of electric generation, transmission, and distribution services
  - Reduced purchases of fuel for on-site thermal energy demand
  - Reduced purchases of ancillary services
- Sales of excess electricity to macro-grid
- Participation in demand response programs
- Provision of ancillary services to macro-grid

Indirect

- Reduced electric T&D losses
- Deferred electric T&D capacity investments
- Utility option value for long-term planning purposes
- Enhanced electricity price elasticity
- Support for deployment of renewable generation

NYSERDA Microgrid Study Benefits

Environmental

- Reduced emissions of greenhouse gases
- Reduced emissions of criteria pollutants

Reliability & Power Quality

- Reduced power interruptions
- Enhanced power quality

Security & Safety

- Safe havens during power outages

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NY Prize: A New Generation of Local Power

- Pipeline of ~25 feasibility studies
- 10 designs selected
- At least 5 projects constructed
- Replicable strategies (“playbook”) for communities in NY and beyond

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Objectives of NY Prize

- Help storm-proof critical infrastructure
- Test business models around new utility products and services while benefitting distribution networks
- Drive effective DER implementation via 3rd Party collaboration
  - Guide regulatory change
  - Inform development of DSP functionality
  - Engage communities in planning

Award Process

All communities enter/apply to competition and are evaluated at each stage by external judges

Critical project partners: Municipalities and Utilities

Evaluation Panel(s)

Threshold _Quantitative_ Criteria	Stage 1 Awards to Conduct Feasibility Assessments	~25 awards for studies ($50 - $100K)	$1-3m
Threshold _Audit Grade Design Criteria_	Stage 2 Feasibility Evaluated Awards for Audit Grade Design	8-10 Awards (up to $500K)	$4-5m
Audit Grade Design Review	Stage 3 Designs Evaluated Awards for Build-out/ Operation	5-7 Awards ($5-7 M)	$32-35m

Allocations

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Screening Process

Stage Zero
Project Concept/Definition

- Identify stakeholder needs
- Prepare statement of needs
- Preliminary business case
- Prepare outline project brief
- Appoint project team

Gateway 1: Approval or denial to proceed with feasibility

Stage One
Feasibility

- Site constraints and opportunities
- Select and appoint consultants
- Develop project brief
- Preliminary project master program
- Options, appraisal and selection
- Funding investment and appraisal
- Project organization and control
- Procurement strategy
- Cost planning and management
- Prepare full business case

Gateway 2 – Approval or denial to proceed with detailed design

Stage Two
Detailed Design

- Prepare detailed consultant RFPs
- Select bidders list
- Bid projects
- Evaluate bids
- Approval to proceed
- Appoint consultants
- Detailed design
- Design team briefing
- Detailed proposals
- Final proposals
- Product information
- Variations to traditional forms of contract

GATEWAY 3 – Approval or denial to proceed to build

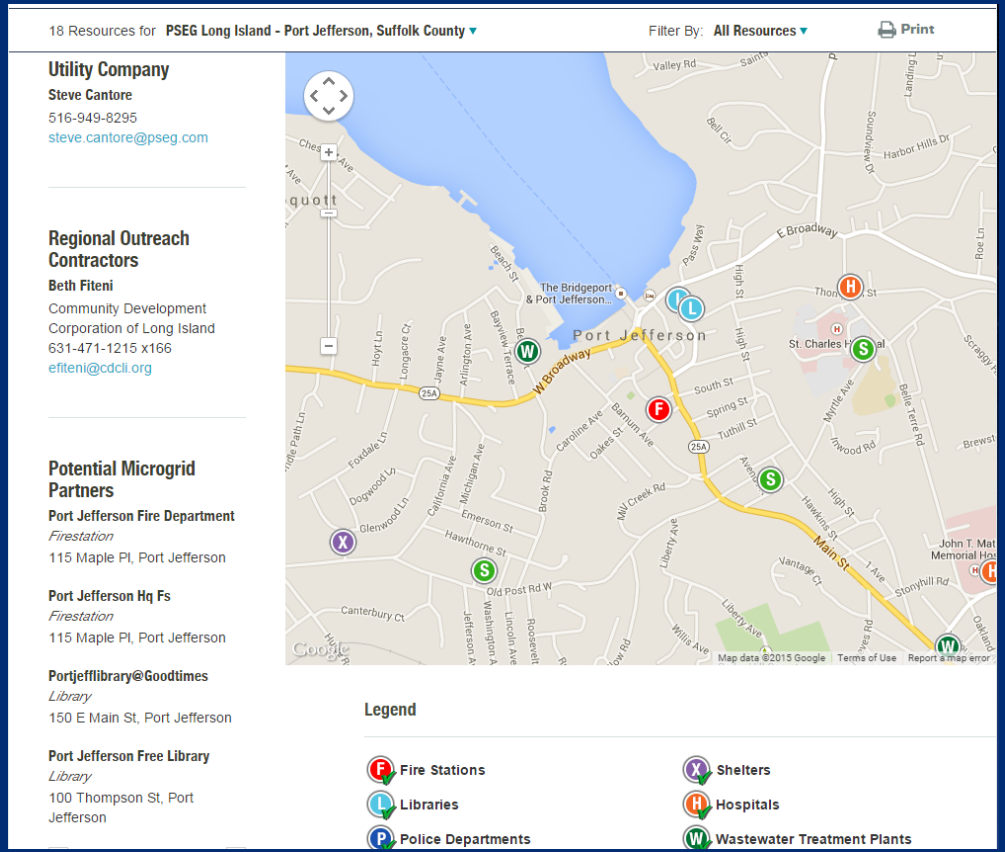
Community Roadmap

Evaluation Criteria

- The overall cost and benefits of the project
- The project's contribution to public need (increasing safety and quality of life for residents in an outage situation)
- The technical and operational performance of the project
- The demonstrated reliability of the proposed microgrid configuration
- The use of clean and renewable generation resources in the project
- Overall financial and managerial capabilities of the developer

Opportunity Zones Across NYS

Pin your project at:
on.ny.gov/1FLhLF3



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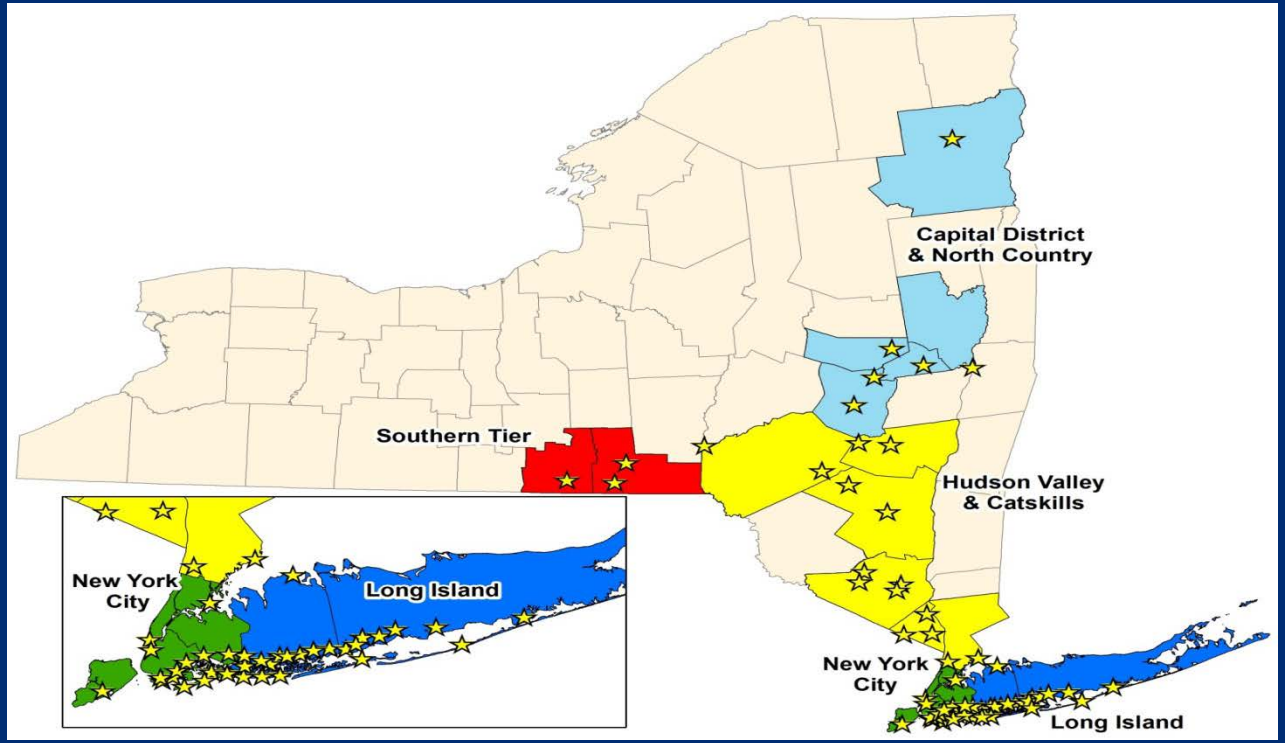
NY Rising Communities



NY RISING COMMUNITIES

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Microgrid Projects in NYRCR Plans

Microgrid projects are prominent across New York State

NY RISING COMMUNITIES

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Next Steps

1. Download RFP at ***http://www.nyserda.ny.gov/nyprize***
2. Assemble working group / core team
3. Identify local cluster of assets including critical infrastructure
4. Organize and educate core stakeholders
5. Identify FlexTech resources or other project consultants for feasibility study and/or design by emailing ***flextech@nyserda.ny.gov***

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prize.ny.gov