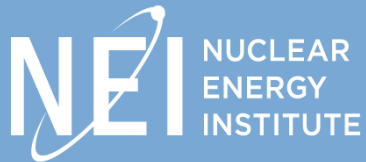# Security Investments Workshop

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The Nuclear Energy Institute (NEI)

NEI is the policy organization of the nuclear technologies industry, based in Washington, D.C. We are responsible for establishing unified policy relating to matters affecting the nuclear energy industry, including the regulatory aspects of operational and technical issues.

NEI's members include entities licensed to operate commercial nuclear power plants in the United States, nuclear plant designers, major architect and engineering firms, fuel cycle facilities, nuclear materials licensees, and other organizations involved in the nuclear energy industry.

Photo Source: www.housingwire.com/articles/39541-top-trade-organizations-support-barring-use-of-fannie-freddie-g-fees-for-federal-spending

U.S. Physical Security Program

The design-basis threat in U.S. regulation is based on adversaries with the following attributes:

- Well-trained and dedicated individuals, willing to kill or be killed;
- Provided with inside assistance;
- Suitable weapons, including handheld automatic weapons;
- Hand-carried equipment, including incapacitating agents and explosives;
- Land and water vehicles to include land and waterborne vehicle bomb assault; and
- A cyber attack.

U.S. Physical Security Program

Armed Security Officer

Photo Source:
https://www.cleveland.com/business/index.ssf/2011/08/nuclear_security_911_firstener.html
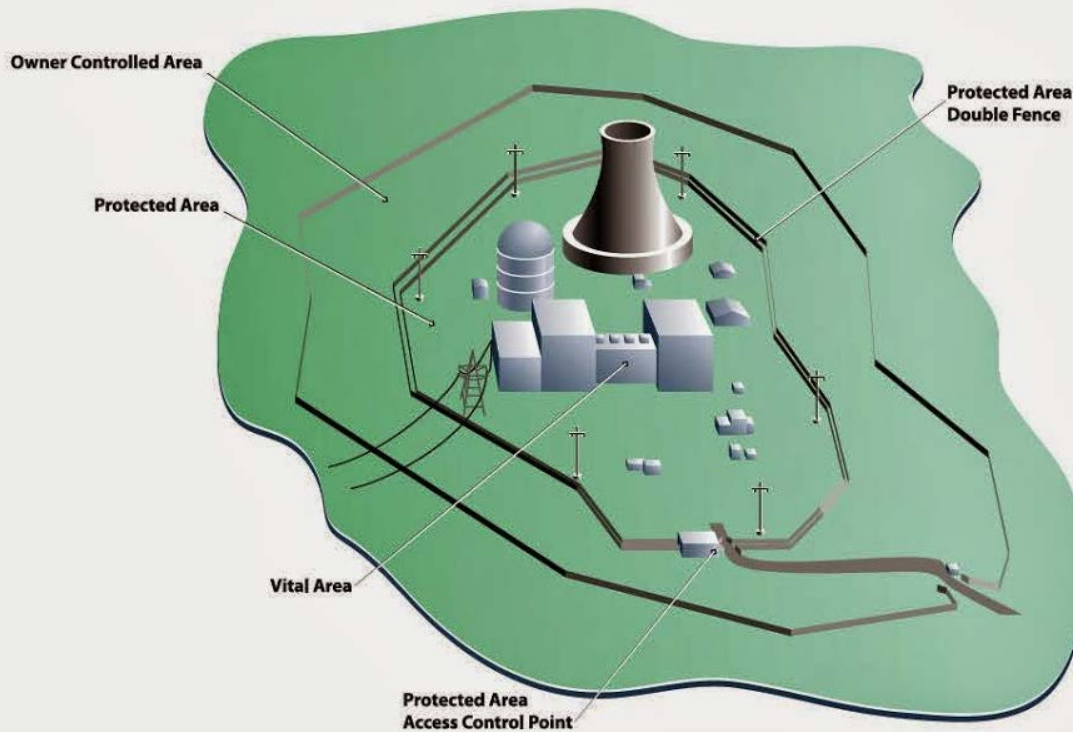
Bullet Resistant Enclosure (BRE)

U.S. Physical Security Program

SINCE 9/11

- Restrictions on access to the facility
- Increased number of security posts
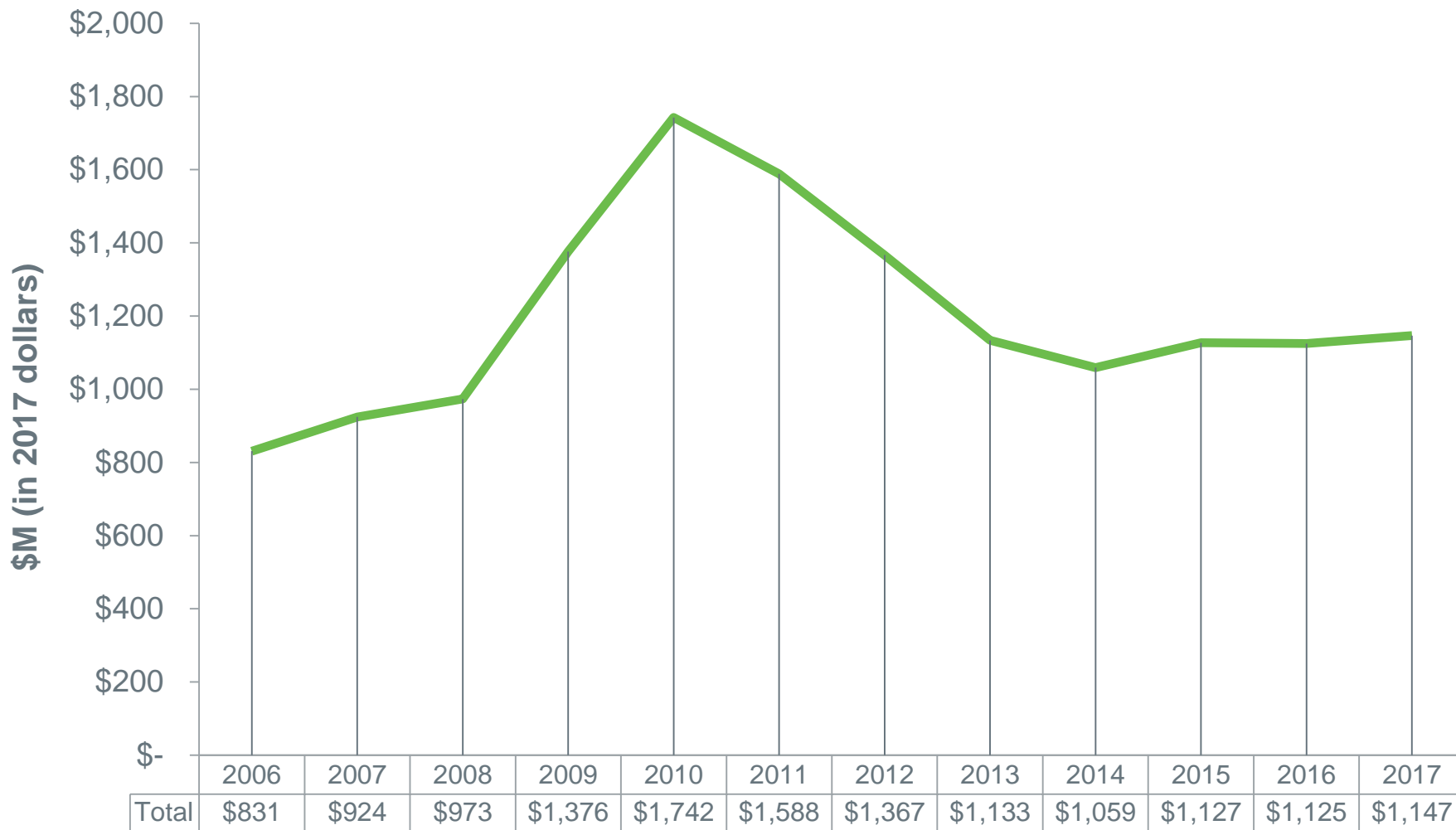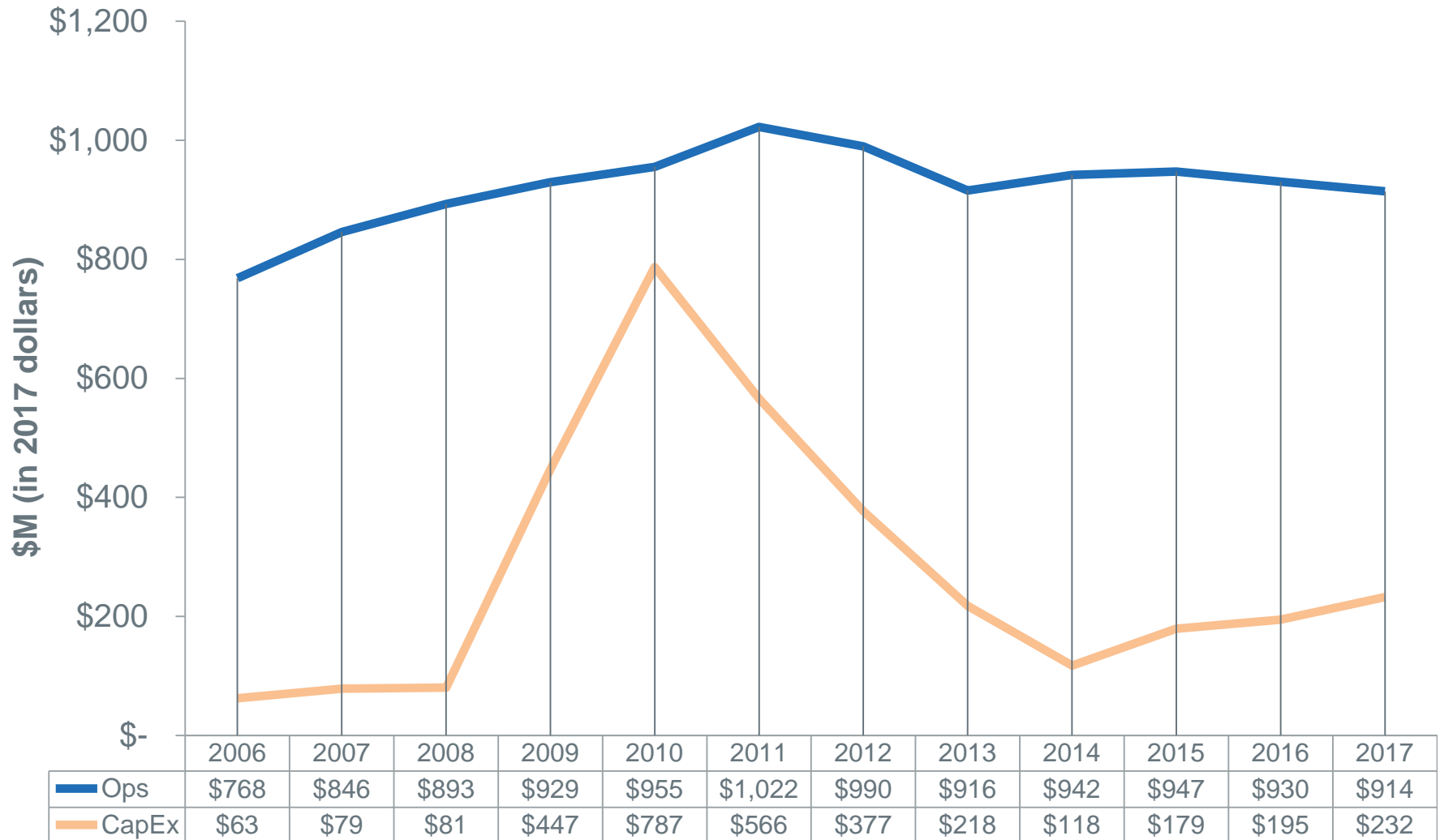- Increased Interaction with external organizations

Nuclear Plant Security Area

Owner Controlled Area

Protected Area

Protected Area
Double Fence

Vital Area

Protected Area
Access Control Point

Search Area at Access Control Point

Total Fleet-wide Security Cost 2006–2017

$M (in 2017 dollars)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total	$831	$924	$973	$1,376	$1,742	$1,588	$1,367	$1,133	$1,059	$1,127	$1,125	$1,147

Total U.S. Fleet Operational and Capital Security Costs 2006–2017

NEI

$M (in 2017 dollars)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Ops	$768	$846	$893	$929	$955	$1,022	$990	$916	$942	$947	$930	$914
CapEx	$63	$79	$81	$447	$787	$566	$377	$218	$118	$179	$195	$232

Source: Electric Utility Cost Group (EUCG)

Security Cost as a Percentage of …

Overall Ops / Overall Capital
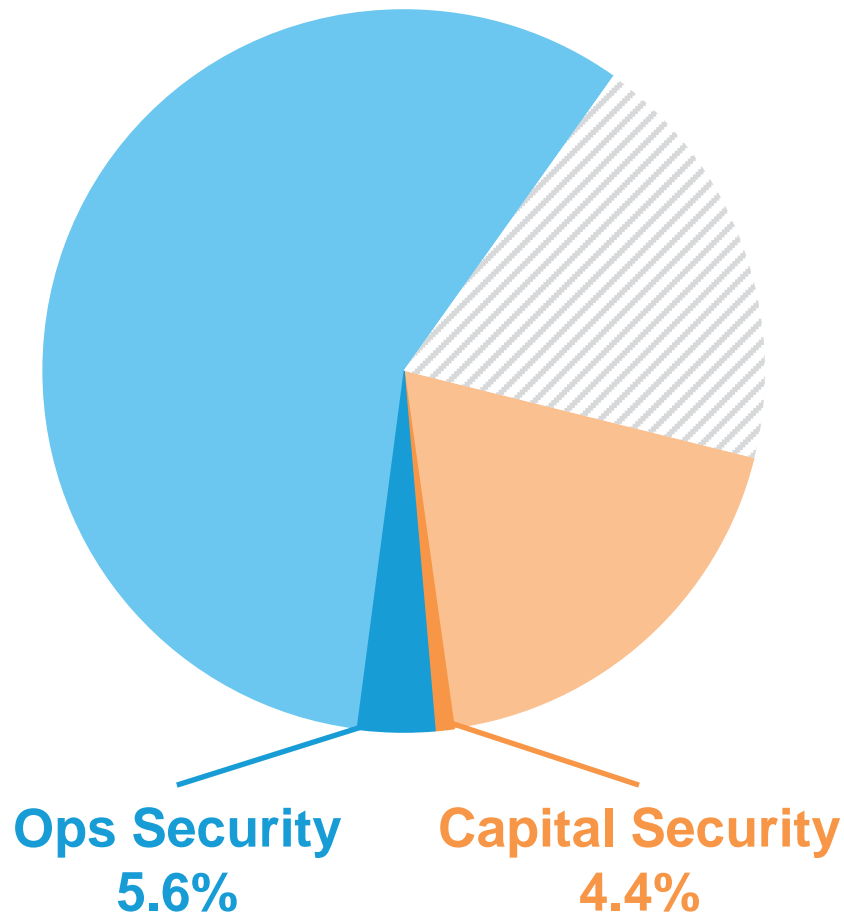
Overall Generating Cost

Ops Security
5.6%

Capital Security
4.4%
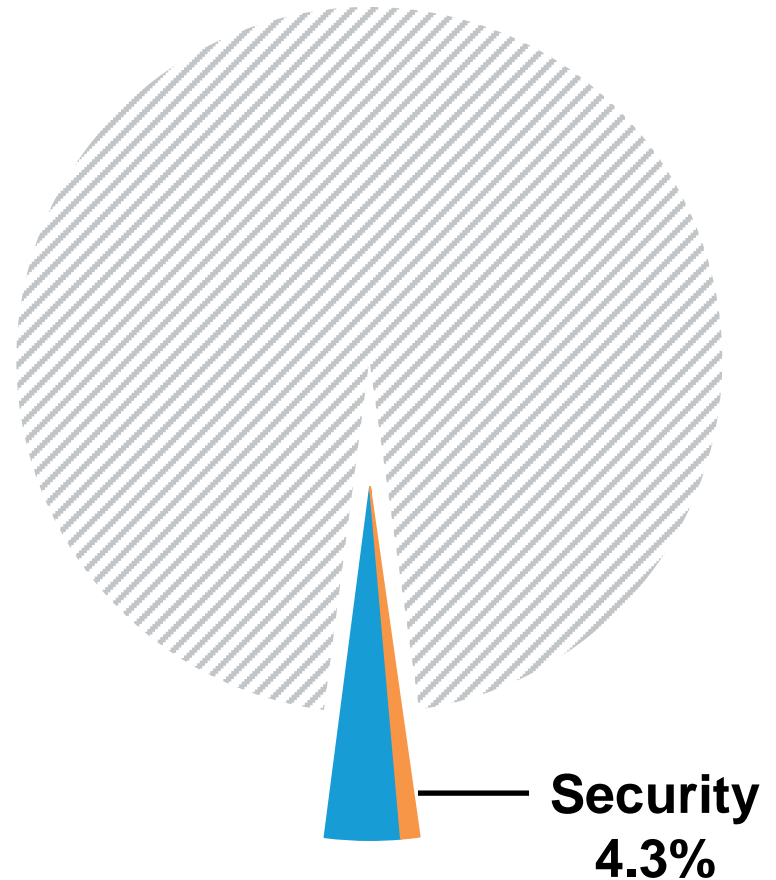
Security
4.3%

Breakdown of Average Operational Budget

Support
8%

Drills /
Exercises
3%

Training
19%

Regular
Time
13%

Overtime
6%

Security
Staffing
70%
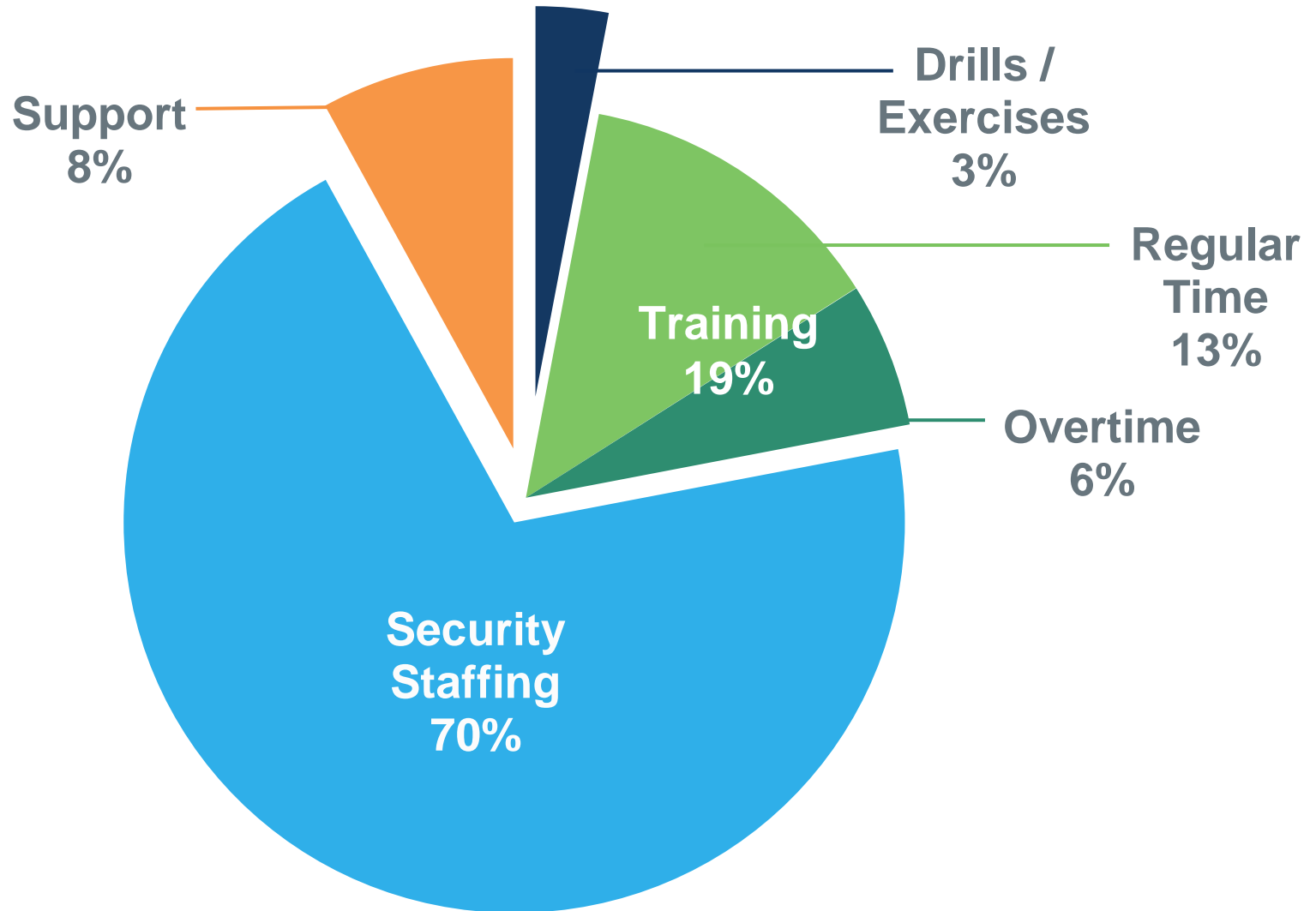
Breakdown of Average Operational Cost
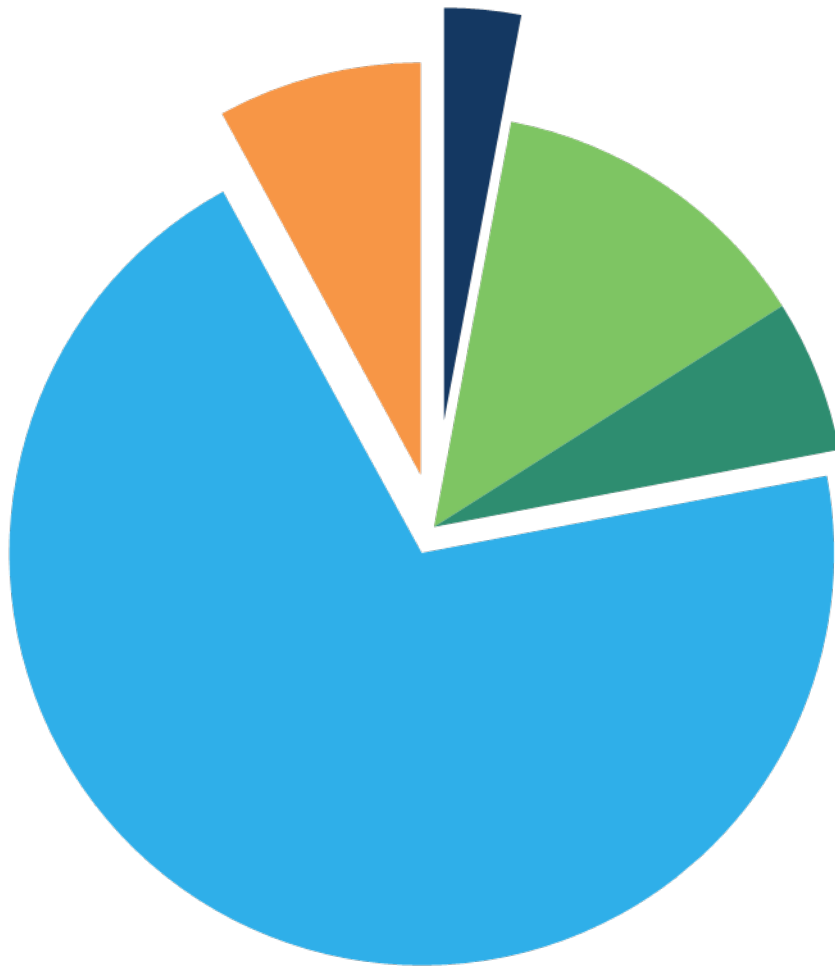
Security Staffing   **$9,842,000**
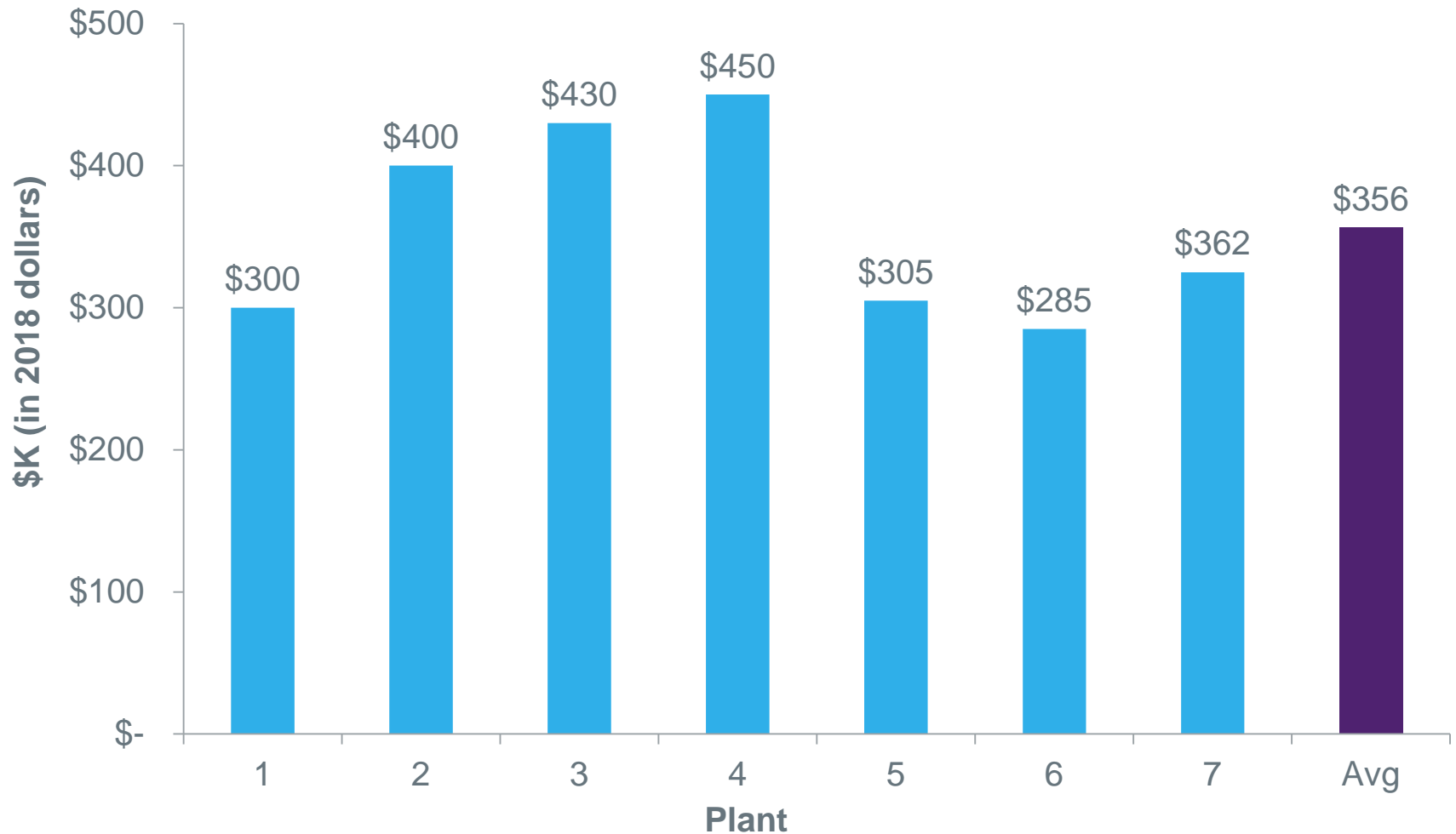
Training   **$2,671,000**

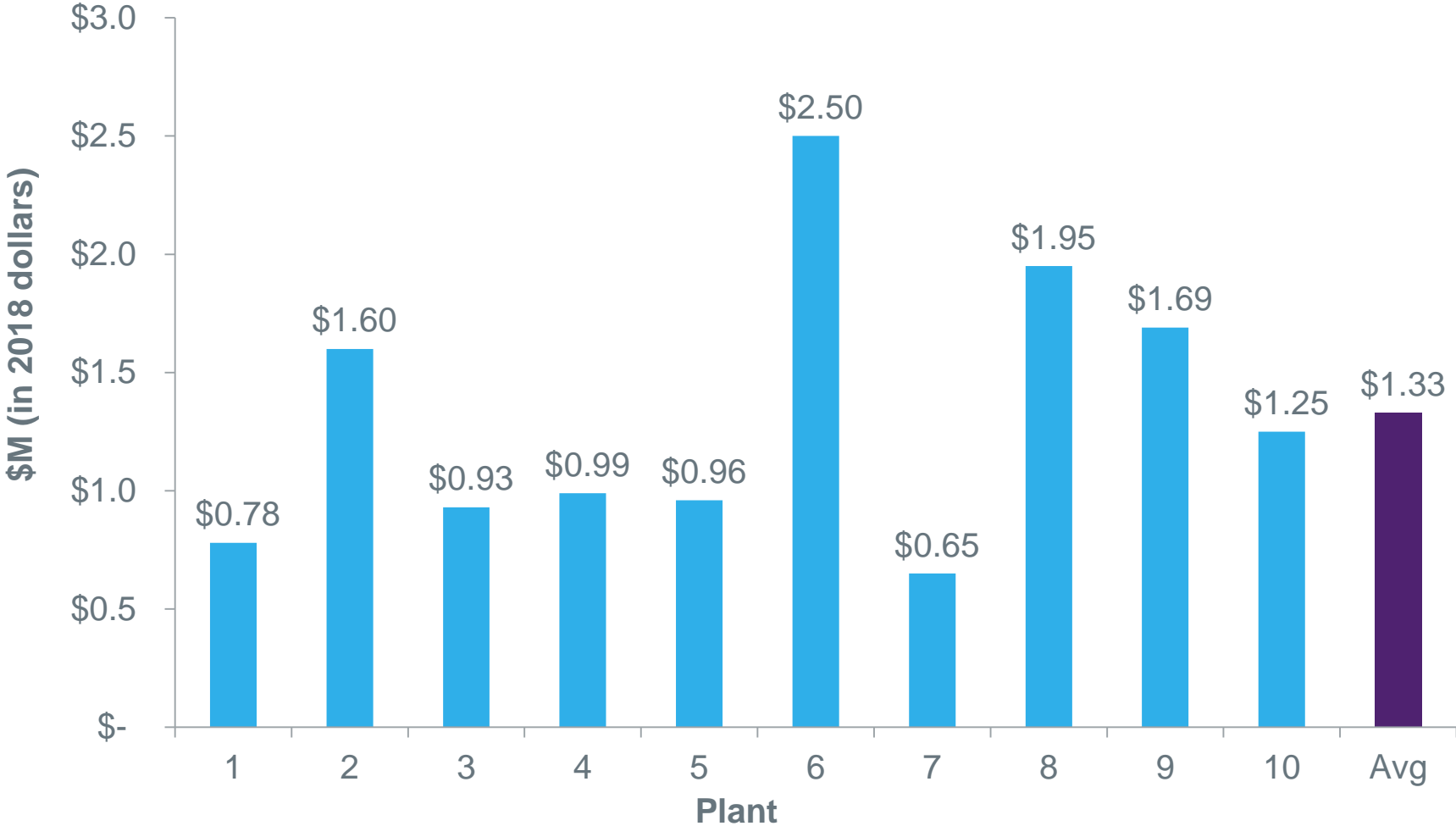• **Regular Time**   **$1,828,000**

• **Overtime**   **$844,000**

Support   **$1,125,000**

Drills / Exercises   **$422,000**

All-In Cost of Each Security Post

$K (in 2018 dollars)

Plant

Plant	Cost
1	$300
2	$400
3	$430
4	$450
5	$305
6	$285
7	$362
Avg	$356

Estimated Labor and Support of Cyber Security Programs

$M (in 2018 dollars)

- Plant 1: $0.78
- Plant 2: $1.60
- Plant 3: $0.93
- Plant 4: $0.99
- Plant 5: $0.96
- Plant 6: $2.50
- Plant 7: $0.65
- Plant 8: $1.95
- Plant 9: $1.69
- Plant 10: $1.25
- Avg: $1.33

Plant

Questions / Discussion

https://www.nei.org/home