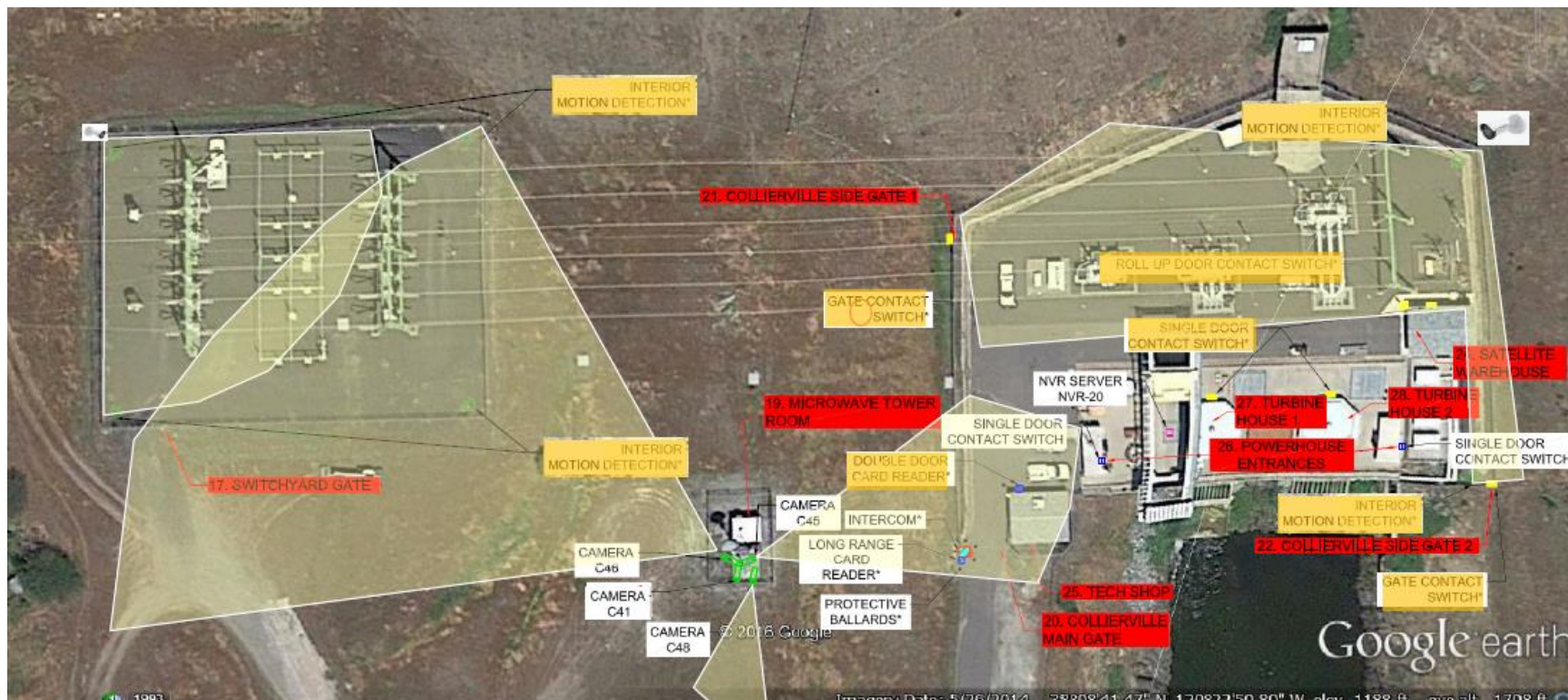


# GHSQ-101 Multi Facility Security Systems Development and Installation



June 7, 2017  
Facilities Committee Meeting

## Background

- Security audit of NCPA facilities completed by CH2M Hill in 2015
  - Detailed site-by-site risk analysis
    - Threats & vulnerabilities
    - Location
    - Existing security systems
  - Cost – benefit analysis
  - Recommended actions

## Audit - Risks & Vulnerabilities

- Sabotage
- Theft
- Unauthorized access
- Armed assailant
- Hunting / Shooting accident
- Loss of Communications
- Regulatory Compliance
- Nature



# Audit - Recommendations

- Identified & analyzed improvements
  - All sites – Procedures
  - Specific site improvements – Security systems & other

Step 7 - Risk/Resilience Management			Cost of Improvement Option (\$)	TOTAL = Annualized Risk Reduction	B/C Ratio	NPV @ Discount Rate (\$)	Payback (Years)
SORTED BY BENEFIT / COST							
LEC	ALL	Upgrade camera system to NVR, adding capability for 30 day recording storage.	\$ 15,000	\$ 355,730	376.64	\$6,869,727	0.0
LEC	CT1-Alameda	Add interior motion detection in Control building and Electrical building.	\$ 5,000	\$ 118,577	376.64	\$2,289,909	0.0
LEC	CT2/LEC	Add shroud to man-gate locks.	\$ 500	\$ 6,613	210.05	\$127,437	0.0
LEC	CT2/LEC	Add access control to Relay Building; locate card readers at exterior doors.	\$ 8,000	\$ 118,577	235.40	\$2,286,251	0.0
ALL SITES	ALL	Establish a policy requiring high visibility vests during remote site work.	\$ 10,000	\$ 107,176	170.21	\$2,063,057	0.0
LEC	CT1-Alameda	Add padlock shroud to blue instrument air shed.	\$ 500	\$ 5,591	177.60	\$107,656	0.0
GEO	GEO1	Provide card reader system at Plant 1.	\$ 15,000	\$ 191,063	202.30	\$3,681,279	0.0
LEC	CT2/LEC	Take down razor wire on Relay inter-tie building and ensure doors locked.	\$ 500	\$ 2,043	64.90	\$38,952	0.0
LEC	CT2/LEC	Add additional cameras to enable continuous viewing and recording of all parts of internal plant road area.	\$ 41,000	\$ 420,885	163.03	\$8,099,627	0.0
		Additional grating and racks placed on each side of back					

# Example – New Spicer Meadows



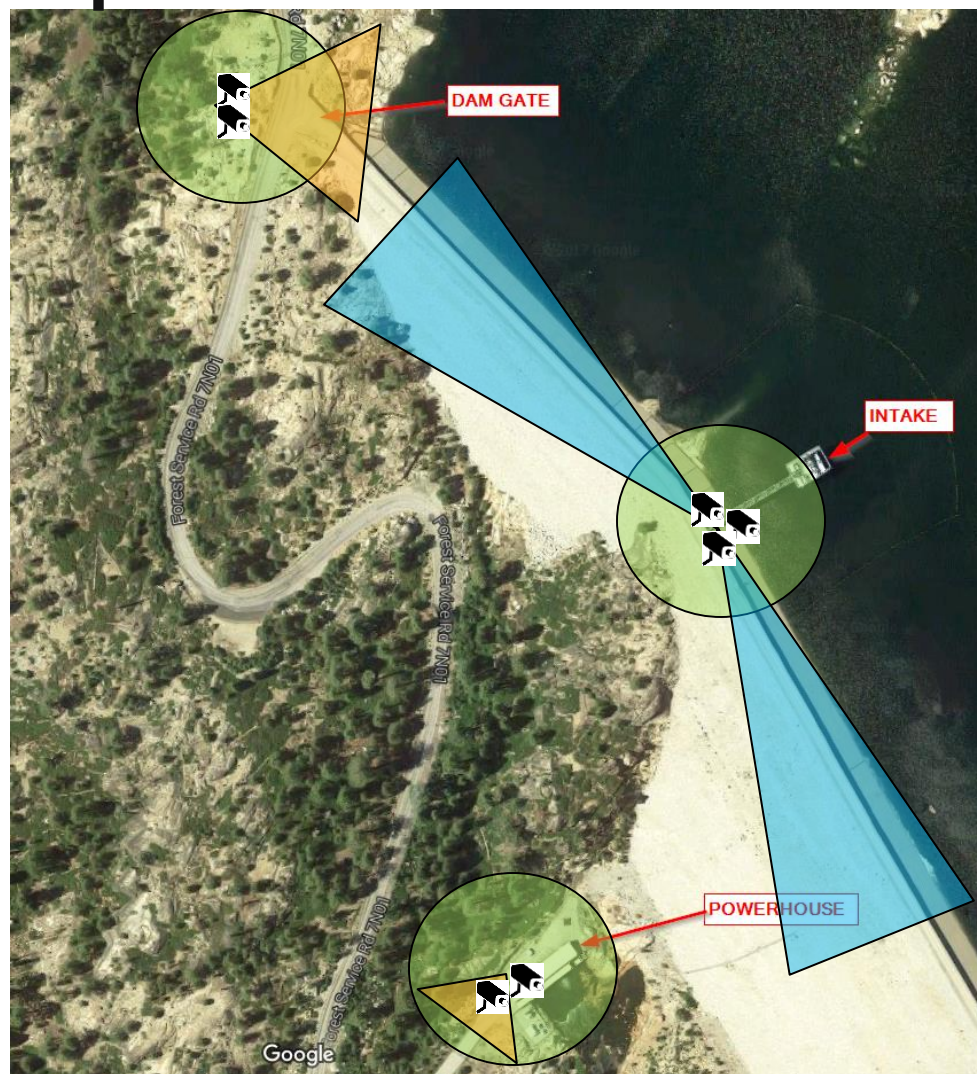
## Example – New Spicer Meadows

- Risks
  - Theft & sabotage
- Vulnerabilities
  - Location
    - Limited existing security
    - Unmanned & remote
    - Near public access/recreation
    - Physical layout
- Other Considerations
  - Dam safety requirements
  - Nature & weather



## Example – New Spicer Meadows

- Security Improvements
  - Surveillance coverage
    - Top of dam – Long range thermal
    - Dam gate
    - Intake structure
    - Powerhouse gate & exterior
  - Intrusion Detection
    - Intake structure doors
    - Powerhouse interior



## Project Scope

- Install Physical security systems across the CT, Geothermal and Hydroelectric NCPA facilities
  - Security systems:
    - Cameras, video monitors and video recording equipment
    - Intrusion and motion detection alarms
    - Access control
    - Servers, workstations & monitors, network equipment
  - Incorporate existing installed on-site security systems
  - Interface with NCPA HQ security systems



# Project Scope – Locations & Equipment

PROJECT	FACILITIES	EQUIPMENT
Geothermal	Front & rear gates Plant 1 Plant 2 Steam field office Bear Canyon pump stations (4)	11 cameras 18 intrusion detectors & access control 3 workstations
Combustion Turbines	CT1 Lodi CT1 Alameda LEC	18 cameras 16 intrusion detectors & access control 3 workstations
Hydroelectric	Murphys office Collierville powerhouse & switchyard Mckays dam New Spicer Meadows dam New Spicer Meadows powerhouse	19 cameras 13 intrusion detectors & access control 3 workstations

## Project Bidding

- Project contractor prequalification process, Nov 2016
  - Prequalify bidders per public works process
  - 6 Submittals, 4 Qualified
- Bid Process
  - December 12–15: Bid walks at plant locations
  - February 7: Public bid opening, 2 received
  - February 27: All bids declared non-responsive
  - March 1: Negotiations process begins
  - May 12: Final bids due

## Evaluation of Bids

- Received two (2) bids on May 12

Contractor	Responsive	Exclusions	Price
Mark III Construction, Inc	Yes	No	\$1,166,801
3D Datacom, Inc	Yes	No	\$1,667,158
Burns & McDonnell, Inc	No	No	N/A

- Burns & McDonnell declined to bid
- Mark III was the low, responsive, responsible bidder

# Evaluation of Bids

- Mark III
  - Lowest bidder
  - Sacramento-based general contractor
  - Proposed security software and hardware based on proprietary architecture, but match current NCPA systems and met specified functional requirements
  - Subcontracted RFI, who installed the security systems at NCPA Roseville and DRC facilities
- 3D Datacom
  - Significantly higher bid
  - Sacramento-based general contractor
  - Proposed security software and hardware open-systems based architecture and potentially easier to administer and expand. But implementation would require integration or replacement with existing NCPA security systems

## Fiscal Impact – By Plant

- Current budgets, including encumbered funds:

Plant	Budget	Bid Amount	Bid Amount (+10% Contingency)
Geothermal	\$408,923	\$325,687	\$358,256
CT1	\$78,420	\$272,764	\$300,040
LEC	\$182,878	\$181,843	\$200,027
Hydro	\$298,435	\$386,507	\$425,158
<b>TOTAL</b>	<b>\$969,270</b>	<b>\$1,166,801</b>	<b>\$1,283,481</b>

## Construction Timelines

- June: Finalize contract
- July-August: Mobilization, material procurement, begin installation at LEC, Lodi and Alameda
- September: Begin installation at Geothermal
- October: Begin installation at Hydro
- November: Finish installation
- December: Turnover, training, demobilization

## Recommendation

- Increase CT1 FY17-18 budget by \$221,620 to address budgeted shortfall
- Authorize the General Manager to execute a public works agreement with Mark III Construction, Inc. and to issue purchase orders and change orders for not to exceed \$1,283,481 for procurement and installation for GSHQ-101 Multi Facility Security Systems at NCPA Generation Services projects

# Questions?



# Backup Slides

## Project Scope

- Combine CH2M Hill recommendations with NCPA analysis
  - Cost
  - Feasibility
  - Intent
  - Operational / day-to-day requirements
  - Existing systems
- Finalized project scope



## Fiscal Impact – Breakout of CT1

- Current budgets, including encumbered funds:

Plant	Budget	Bid Amount	Bid Amount (+10% Contingency)
Geothermal	\$408,923	\$325,687	\$358,256
CT1	\$78,420	\$0	\$0
LEC	\$182,878	\$197,026	\$216,729
Hydro	\$298,435	\$386,507	\$425,158
<b>TOTAL</b>	<b>\$969,270</b>	<b>\$909,220</b>	<b>\$1,000,142</b>