Church Facilities – Recapturing Costs

A Stewardship Imperative?

Henry Conde
Parish Administrator
Galilee Episcopal Church
Virginia Beach, Virginia
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The Facts: Overall Costs

1. Personnel

2. Healthcare…and rising

3. Facilities Costs

4. Revenues

(Note- Buildings consume 40% of the energy and 70% of the electricity produced in the U.S.)
IMFA (International Facilities Managers Assoc.) recommends a budget allocation for maintenance and repairs to be in the 2%-4% range of the aggregate CRV. Huhhh?

CRV=Current Replacement Value of Facility

Replacement Cost for Facilities (est.$150.00/SF)*
(*depends on geographical location)
1. Facilities size 40,000 SF

2. Replacement Costs of $150.00/SF CRV IMFA

3. CRV = 40,000 SF x $150.00 = $6,000,000

4. CRV Index = $6,000,000 x 2.0%* = $120,000**

5. Maint Costs per SqFt = $120,000 / 40,000 SqFt = $3.00/SF

(* (2-4% recommended as Repair and Maintenance factor / NOTE: Typical annual facility deterioration factor is 2%)
(** Assumes the facility has been maintained, otherwise you may need a factor between 4-5%)
## What does this ($3.00) mean?

- **City Government:** $2.20 /SF
- **Education:** $2.28 /SF
- **Banking:** $2.47 /SF
- **Healthcare:** $2.85 /SF
- **Churches:** $1.78 /SF (Mid Atlantic Mean)
- **Total respondents:** $2.21 / SF (Mid Atlantic Mean)

(Avg 42% Preventive maintenance / 58% Repairs)
Now...how can I save $$ in order to spend it on my facility?

- **Lighting**: We all have...
  - Fluorescent Tubes - Mercury based, degrade, disposal
  - CFL: a.k.a Curly Q’s - More mercury than fluorescent tubes
  - Incandescent lights - Short Lifespan / Not efficient
  - Metal Halide - Good lighting / HOT / Not efficient
  - High Pressure Sodium – Good Lighting / Not efficient
  - Halogen - HOT!!! HOT!!! Wattage hogs
Quick Case Study: Exit Signs

- A Code Requirement
- They must be on 24/7 365 days
- Avg 40 Watt each / LED 3 Watts replacement
- Galilee 46 signs
- $31.00 savings over incandescent (Dominion Power est.)

- Annual Savings .......$31.00 / Exit Sign
- # Exit Signs .........X 46
- Potential Savings $1,426 annually
Recapturing Energy Costs: Occupancy Sensors …Great ROI !!!

<table>
<thead>
<tr>
<th>Application</th>
<th>Potential Energy Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office (Private)</td>
<td>25–35%</td>
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<tr>
<td>Offices(open spaces)</td>
<td>20–25%</td>
</tr>
<tr>
<td>Rest Rooms</td>
<td>30–75%</td>
</tr>
<tr>
<td>Corridors</td>
<td>30–40%</td>
</tr>
<tr>
<td>Storage Rooms</td>
<td>45–65%</td>
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<tr>
<td>Meeting Rooms</td>
<td>45–65%</td>
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<tr>
<td>Conference Rooms</td>
<td>45–65%</td>
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</tbody>
</table>
Recapturing Energy Costs: Replacement Strategy...be relentless

- Computers
- Monitors / Screens
- Copiers
- Washers and Dryers
- Hot Water Heaters
Recapturing Energy Costs: Religious Institutions: No Costs!!

Duct Testing and Sealing

- Customers with 10 Megawatts or less
- Lifetime energy savings 15-20%
- Eliminates hot and cold spots
- Reduction of the risk of pollutants entering and circulating through your facility
- Improved Airflow
Recapturing Energy Costs: Duct Testing and Repairs

- **Main Attic Duct**

  - Before: Condensation
  - After: Sealed / Repaired / No Leaks
Recapturing Energy Costs: Contact Information

- **Chris Anderson**  
  Utility Project Manager  
  chris@dominionconservation.com  
  o 757-499-0399 / m 804-475-8374

- **Jim Zolty**  
  Utility Project Manager  
  jim@dominionconservation.com  
  o 804-399-7806 / m 804-592-7455
HVAC Replacements 13–14 EER:
Incentives / Rebates

https://www.dom-vendor.com/non-residential-programs
Recapturing Costs: “Point of Use” Hot Water Heater

- Replace traditional large 24/7 Hot Water Heaters with instant / on demand “point of use” unit(s) only where required.

(65 Degrees to 145F)
Plug Load = Regular equipment plugged into the outlet (approx 20% of facility electrical use)

Phantom Load = is the continual use of energy for plug load (microwaves, computers, TV’s) even when turned off.

- News FLASH!!!... 75% of plug load energy is used when an item is “OFF”
- What to do? ..Unplug, minimize use or install plug load adapters
Recapturing Costs: Dynamic Pricing: Trade Services Strategy:

- Never call the plumber when you need him!...unless____?  
  - That goes for the Painter, Electrician, IT Guy, etc.

- Why? or Why not?
  - Example: Commercial hourly rate $135  
    - Residential hourly rate $ 90

- Negotiate a “Single Source - Dynamic Pricing”
Do these strategies work year over year?

Monthly Electricity Costs in $$

- 2016
- 2015
High / Low Comparison

Monthly Electricity Costs in $$

Thousands

<table>
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<th>Mar</th>
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<th>Jun</th>
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- $15K
- $41K

Legend:
- 2016
- 2015
- 20XX
Recapturing Costs...A Stewardship Imperative?
In summary...Absolutely...Yes!

“Recaptured Costs” means a “Sustainable Church Facility”
Questions?

Call /Email me anytime … (757) 428-3573 x33
Henry.Conde@galileechurch.net