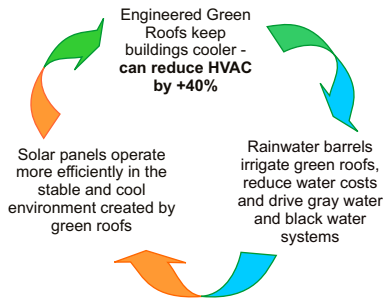




## When 1 + 1 + 1 = 5

### Combining green technologies to improve ROI and LEED performance



Design professionals are generally aware of the benefits of green roofs, rainwater harvesting and photovoltaics. But very few are aware of the symbiotic benefits that these technologies provide when used together. These benefits translate into improved building envelope performance, higher LEED qualification and enhanced return on investment for clients.

#### Photovoltaics and Green Roofs

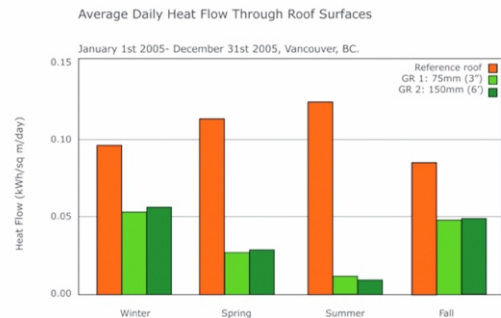
Most photovoltaic arrays are simply mounted on roofs that have exposed membranes reaching upward of 150F (50+C). This overheating greatly reduces the performance of PV modules by 25% or more. A green roof reduces the ambient temperature around PV modules by over 50% adding to PV performance, lifespan and ultimately requiring less PV modules to be installed for the same power output.

ZInCo provides a solar rack system that does not require any structural mounting to the roof – it is held in place by the drain board and ballasting. Wind up-lift is countered by increasing the depth of the growing medium, ballast or river rock under the rack mounting system.

#### Rainwater Harvesting and Green Roofs

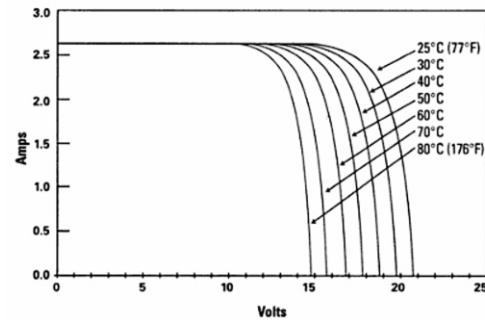
Most green roof systems require irrigation – even those with built-in water reservoir systems like ZinCo. So why not add to the storm water mitigation performance of the green roof by adding a rainwater harvesting or black water recycling system to fulfill those irrigation needs and maybe even supply the building's grey water requirements as well? The end result could be a savings of 50% of the treated drinking water usage for the building while further reducing storm water runoff by storing the rainwater in GRAF underground tanks.

### Green Roofs Are Cool!



reference: Dr. Karen Liu, Centre for the Advancement of Green Roof Technology, BCIT.

### Photovoltaics Perform Better When Cool



EFFECT OF CELL TEMPERATURE ON MODULE PERFORMANCE (12VDC NOMINAL)

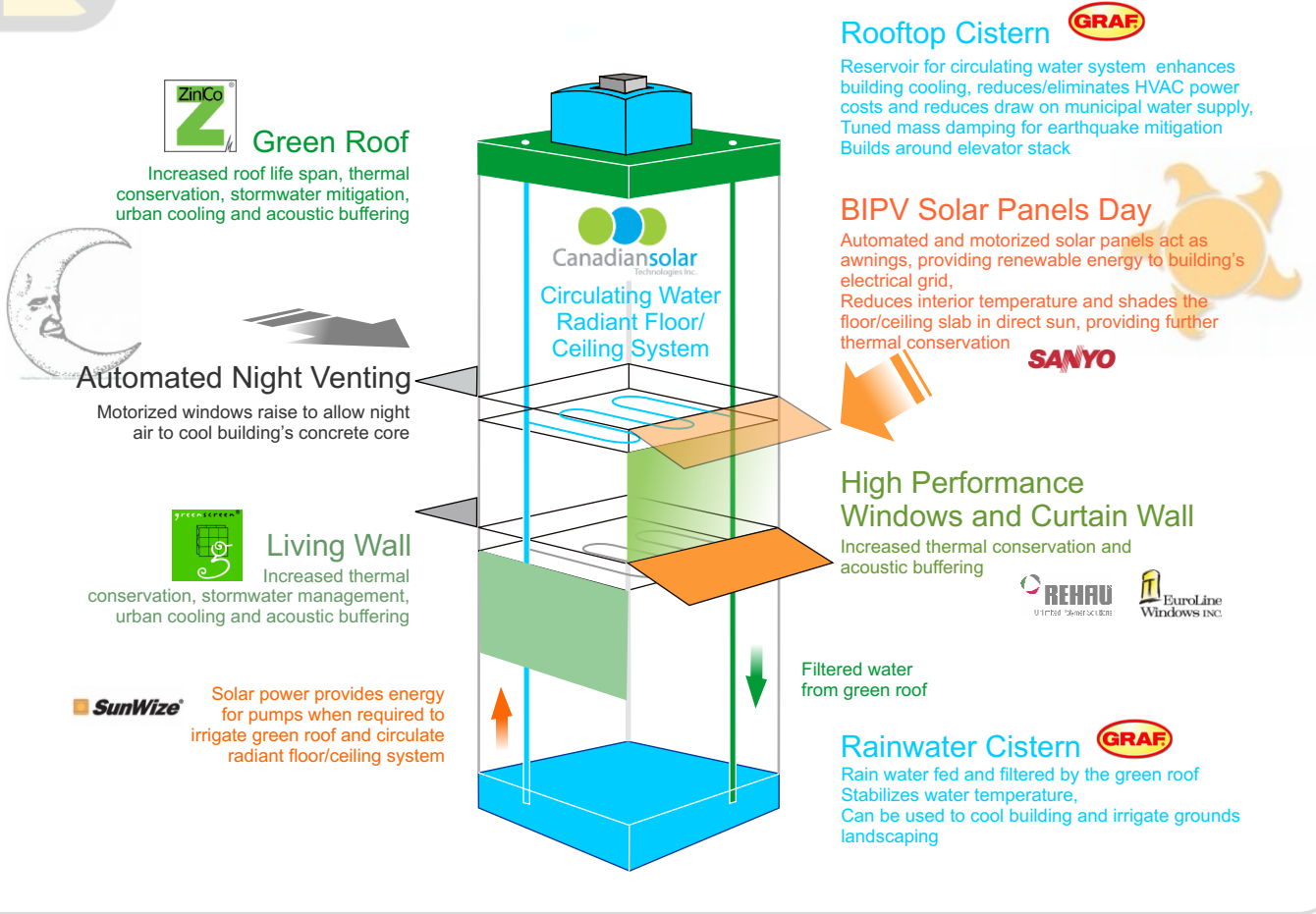
## lunch & learn



Architek is an AIA Education Provider (with Sustainable and HSW designation) on a range of subjects pertaining to green and sustainable building envelope design. To arrange a session, email us at [lunchandlearn@architek.com](mailto:lunchandlearn@architek.com) or call us toll free at 1 888 371-5585.



## Architek's Integrated Green Technologies To Improve ROI, LEED Performance & Building Value



## We're A Partner To Help You Grow Your Green Business

Architek helps you grow your green business with a range of innovative services and products:

- design assistance from concept to development permit
- technical drawing and engineering support
- client meeting support
- world-class green + sustainable products



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