

Salix Technology List and Persistence Factors (May18)



SOLVING ENERGY EFFICIENCY FINANCE IN THE PUBLIC SECTOR

*PF - Persistence Factor

| Project Type | Work Type | Current PF* (Basic maintenance) |
|-----------------------------|--|------------------------------------|
| Boilers | Boilers - burner management | 6.84 |
| | Boilers - burner replacement | 13.50 |
| | Boilers - control systems | 6.84 |
| | Boilers - replacement combination | 7.22 |
| | Boilers - replacement condensing | 14.44 |
| | Boilers - replacement modular | 10.83 |
| | Boilers - retrofit economiser | 10.83 |
| Building management systems | BEMS - bureau remotely managed | 9.00 |
| | BEMS - not remotely managed | 6.84 |
| | BEMS - remotely managed | 8.42 |
| Combined heat & power | Biomass CHP | 7.60 |
| | Gas Turbine | 11.40 |
| | Gas, Diesel, gasoil engine CHP | 15.20 |
| | CHP Private Wire Connection | 30.00 |
| Compressor | Compressed Air: air compressor upgrade | 14.44 |
| Computers & IT solutions | CRT to flat screen LCD | 7.20 |
| | CRT to LED monitors | 7.20 |
| | Energy Efficient File Storage Replacement | 9.00 |
| | Energy Efficient Server Replacement | 9.00 |
| | Evaporative cooling for ICT | 13.68 |
| | Free Cooling for ICT | 13.68 |
| | Hot aisle/cold aisle containment | 10.83 |
| | LED monitors instead of LCD (cost difference) | 7.20 |
| | Multi Functional Devices | 4.50 |
| | Network PC power management | 4.00 |
| | Thin client | 9.00 |
| | Uninterruptible Power Supplies | 18.00 |
| Virtualisation | 9.00 | |
| Cooling | Cooling - control system | 6.84 |
| | Cooling - plant replacement/upgrade | 8.21 |
| | Energy Efficient Chillers | 14.44 |
| | Free cooling | 13.68 |
| | Replacement of air conditioning with evaporative cooling | 13.68 |
| Hand Dryers | Hand Dryers - replacement to more efficient type | 8.21 |
| Energy from waste | Anaerobic digestion | 15.20 |
| | Incineration | 15.20 |
| Heating | Connect to existing district heating via plate HE | 28.50 |

| Project Type | Work Type | Current PF* (Basic maintenance) |
|-------------------------------|---|------------------------------------|
| | Direct electric heating to heat pump (air source) | 10.83 |
| | Direct electric heating to heat pump (ground source) | 16.72 |
| | Direct electric heating to heat pump (water source) | 16.72 |
| | Heat recovery | 10.83 |
| | Heating - direct fired system | 9.50 |
| | Heating - discrete controls | 6.84 |
| | Heating – distribution pipework improvements | 15.20 |
| | Heating - TRVs | 6.84 |
| | Heating - zone control valves | 11.88 |
| | Oil to Gas - boiler fuel switching | 7.92 |
| | Replace steam calorifier with plate heat exchanger | 28.50 |
| | Steam trap replacements | 15.20 |
| | Thermal Stores | 18.00 |
| Hot water | Flow restrictors | 14.00 |
| | Hot Water - chlorine dioxide dosing and biocide treatment | 9.50 |
| | Hot Water - distribution improvements | 18.00 |
| | Hot Water - efficient taps | 11.00 |
| | Hot Water - point of use heaters | 9.50 |
| Industrial kitchen equipment | Steriliser to dishwasher replacement | 10.80 |
| Insulation - building fabric | Cavity wall insulation | 30.00 |
| | Double glazing with metal or plastic frames | 28.00 |
| | Dry wall lining | 30.00 |
| | Loft insulation | 27.00 |
| | Retrofit single glazing units | 8.00 |
| | Roof insulation | 30.00 |
| | Secondary glazing | 7.92 |
| Insulation - draught proofing | Insulation - draught proofing | 29.25 |
| Insulation - pipework | Heating pipework insulation (external) | 9.00 |
| | Heating pipework insulation (internal) | 22.50 |
| Insulation - other | Air Curtains - ambient | 11.40 |
| | Air Curtains - heated | 10.83 |
| | Automatic speed doors | 8.45 |
| | Automatic/revolving doors | 8.45 |
| | Draught Lobby (external) | 29.25 |
| | Draught Lobby (internal) | 29.25 |
| | Radiator reflective foil (external walls) | 8.00 |
| Lab Upgrades | Diode pumped solid state lasers | 6.80 |
| | Energy Efficient Drying Cabinets | 12.80 |
| | Energy Efficient Freezers (-25°C) | 11.40 |

| Project Type | Work Type | Current PF* (Basic maintenance) |
|-------------------|--|------------------------------------|
| | Energy Efficient Freezers (-86°C) | 7.60 |
| | Energy Efficient Fume Cupboards | 16.25 |
| | Energy Efficient Growth Cabinets | 10.80 |
| | Fume Cupboards - Auto Sash Closing + PIR | 6.84 |
| | Fume Cupboards - VAV Controls + Inverter Drives | 10.26 |
| | Heat Recovery on Extract System | 10.83 |
| Lighting controls | Lighting - discrete controls | 8.89 |
| | Lighting control system centralised | 10.26 |
| Lighting upgrades | Compact Fluorescent including changing the fitting | 20.00 |
| | Compact Fluorescent using same fitting | 10.00 |
| | Electronic ballast with dimming control | 11.40 |
| | HP Sodium including new fitting | 20.00 |
| | Induction Fluorescent including changing the fitting | 20.00 |
| | Replace halogen with HID metal halide | 20.00 |
| | T12/T8 to CCFL including new fitting | 20.00 |
| | T12/T8 to CCFL using same fitting | 10.00 |
| | T5 lighting including changing the fitting | 20.00 |
| | T5 lighting retrofit using adaptors | 10.00 |
| | T8 lighting including changing the fitting | 20.00 |
| | T8 lighting retrofit using adaptors | 10.00 |
| LED lighting | Compact Fluorescent to LED including new fitting | 25.00 |
| | Compact Fluorescent to LED using same fitting | 13.00 |
| | Flood lighting to LED including changing the fitting | 20.00 |
| | Halogen to LED including changing the fitting | 25.00 |
| | Halogen to LED using same fitting | 13.00 |
| | Incandescent to LED including new fitting | 25.00 |
| | Incandescent to LED using same fitting | 13.00 |
| | T12/T8 to LED including new fitting | 25.00 |
| | T12/T8 to LED using same fitting | 13.00 |
| Street lighting | Fit centralised controls | 12.72 |
| | Non-illuminated bollards | 30.00 |
| | Replace control gear | 12.72 |
| | Replace luminaire incorporating electronic ballast | 15.00 |
| | Replace luminaire with LED | 20.00 |
| | Solar powered bollards | 10.00 |
| Traffic lights | Replace with LED including new fitting | 20.00 |
| | Replace with LED using same fitting | 10.00 |
| Motor controls | Fixed speed motor controls | 11.40 |
| | Motors - flat belt drives | 11.40 |
| | Variable speed drives | 10.26 |
| Motor replacement | Motors - high efficiency | 15.00 |

| Project Type | Work Type | Current PF* (Basic maintenance) |
|--------------------|--|------------------------------------|
| Office equipment | Office equipment improvements for non-ICT | 3.00 |
| Renewable energy | Biomass boilers | 15.12 |
| | Solar PV | 22.50 |
| | Solar Thermal | 17.10 |
| Swimming | Swimming pool covers - manual | 7.92 |
| | Swimming pool covers - motorised | 8.45 |
| Time switches | Time switches | 6.84 |
| Transformers | Low loss | 30.00 |
| | Low loss (cost difference) | 30.00 |
| | Low loss+voltage management | 30.00 |
| | Low loss+voltage management(cost difference) | 30.00 |
| | Transformer tapping change | 30.00 |
| Ventilation | Fans - air handling unit | 23.75 |
| | Fans - high efficiency | 14.25 |
| | Phase change material | 23.75 |
| | Ventilation - distribution | 30.00 |
| | Ventilation - presence controls | 6.84 |
| | Ultrasonic humidifiers | 7.22 |
| Voltage management | Voltage management - fixed ratio | 19.00 |
| | Voltage management - variable ratio | 19.00 |

Persistence factor methodology:

Persistence factors are the anticipated lifetime of an energy efficiency technology used to calculate lifetime savings. The persistence factor is used in the calculation of cost to save a tonne of CO₂ over the lifetime of an application (£/tCO₂LT).

The Persistence Factors for individual technologies employed by Salix are based on and are consistent with those derived by the Carbon Trust. In early 2009/10 the Carbon Trust undertook a review of the existing Persistence Factor Methodology. Following a consultation in early 2010, a revised model has now been adopted.

If you work for a public sector organisation and are looking for funding for an energy efficiency which is not listed above but you feel fits the Salix criteria for funding, we may be able to add this to our supported technology list. Guidance on our standard process for this can be found on the Salix website at

<http://salixfinance.co.uk/knowledge-share/technologies>