HOUSING AUTHORITY OF THE CITY OF SEDRO-WOOLLEY

SPECIAL MEETING MINUTES
OF THE
BOARD OF COMMISSIONERS

Friday, June 2, 2017
1:30 pm
Commissioners via conference line

Sedro-Woolley, WA 98284

Agenda

I. Call to Order

II. Roll Call

III. Public Comment

IV. Resolution for Discussion & Approval

A. **Resolution No. 457:** A Resolution of the City of Sedro-Woolley authorizing its Executive Director to cause the Washington State Department of Enterprise to execute on its behalf an Energy Services Agreement

V. Adjournment

Members of the public who would like to provide public comment or require special accommodations/assistance are requested to notify the Board Coordinator, Jessica Olives, in writing at 600 Andover Park West, Seattle, WA 98188, by email jessicao@kcha.org or by calling 206-574-1194 prior to the meeting date.

SEDRO-WOOLLEY
HOUSING AUTHORITY

TO: Board of Commissioners

FROM: Connie Davis, Deputy Executive Director

DATE: June 2, 2017

RE: **Resolution No. 457: Authorizing the Executive Director of the Housing Authority of the City of Sedro-Woolley (SWHA) to cause the Washington State Department of Enterprise Services to execute on its behalf an Energy Services Agreement**

Summary

Resolution No. 457 authorizes the Executive Director to negotiate and approve the execution by the Washington State Department of Enterprise Services (DES), on SWHA's behalf, of an energy performance agreement with Johnson Controls, Inc. (JCI).

This agreement, if approved by the U.S. Department of Housing and Urban Development, will extend the existing energy performance project at SWHA and expand the project to include the installation of up to $750 thousand in energy conservation measures (ECMs) at the SWHA portfolio.

Background

As reviewed with the Board in April, an Energy Performance Contract (EPC), is an important tool used by public housing authorities to achieve incremental funding for operations and capital. The EPC program was authorized by the United States Congress to spur investment in cost-effective ECMs in buildings or other government infrastructure.

SWHA's initial EPC project dates back to 2006 and, if not extended, will expire at the end of 2017. As SWHA's energy services consultant, JCI has analyzed the existing agreement and, based on its audit of Cedar Grove and Hillsview, JCI is proposing 1) the optimization, extension and adjustment of the existing EPC (Phase I) for an additional 8 years, and 2) the installation of new ECMs as part of a second EPC (Phase II) that would last for a full 20 years. A more complete description of the proposed project is set forth in the Executive Summary dated May 26, 2017.

Discussion

After applying conservative assumptions, it is anticipated that this initiative will generate up to $2 million in overall cash flow to SWHA over the next 20 years. This cash flow will be used to pay the costs of the project, including financing, maintenance

costs and replacement reserves, with the balance to be retained by SWHA for capital and operating costs. Under HUD rules, the cash balance to be retained by SWHA may not exceed 25% of total project cash flow.

Recommendation

This Resolution will authorize the Executive Director to submit to HUD, after project details have been completely finalized, a Phase I extension and a Phase II EPC for the SWHA properties for HUD's review and approval.

After HUD approval has been received and a financing package is available for Board approval, the Commissioners will have an opportunity to review the final Phase II EPC project and authorize its implementation under a separate resolution.

Passage of Resolution No. 457 is recommended.

ENERGY PERFORMANCE CONTRACT
PROJECT PROFILE

KCHA is still reviewing the final numbers for the EPC, Phase II. However, the current proposal is as follows:

Total Capital Investment:	$710,000 (NTE value of contract is $750,000)	
Debt Service (p & i)	965,138	
EPC Replacement Reserve	50,615	(over the life of the project - 20 years)
IGA, M&V-HUD filings	161,302	(over the life of the project - 20 years)
Internal Costs to Maintain	250,639	(over the life of the project - 20 years)
Total Project Cost	$1,427,694	

Total Estimated Savings, including $128,811 of rebates (20 years)
$1,953,210

Note that the above estimates are slightly different from the May 26, 2017 JCI-provided Executive Summary. Until the HUD submission is finalized, these estimates will vary. Under all scenarios, however, savings will be sufficient to pay all project costs.

Financing:
HUD regulations require debt as part of the EPC project structure and debt is required to be at a fixed interest rate. KCHA is willing to lend up to $750,000 to SWHA for a 20-year term at 5% interest under an unsecured note. This approach will save the time and fees involved in seeking an outside investor under a municipal lease structure and will avoid any need to request a Section 30 waiver from HUD. If the Board approves this approach, KCHA will prepare a note and loan agreement for review by the Commissioners at a subsequent meeting. The KCHA and SWHA Boards will each be asked to approve the debt structure prior to any commitment.

Construction Plan for any new ECMs:

KCHA proposes to use its internal staff to manage subcontractors in the installation of the proposed ECMs for an all-in construction management fee of 10%. No other overhead/profit will be charged. On KCHA's own project, JCI is managing the work and charging an additional 24% of total construction cost fees for construction management, project management and overhead/profit. Construction at the SWHA portfolio can be expected to kick off in the Fourth Quarter, 2017 or First Quarter, 2018, with all work complete within about four months. A construction schedule will be established with SWHA before an initial Notice to Proceed is issued.

Risks and Mitigation:
The most important areas of risk for this type of project relate to the estimation and achievement of projected utility savings, the cost of new product installation, the impact on on-going maintenance operations, and project financing risk. These risk areas are described below, followed by mitigating circumstances:

Achievement of Projected Savings. Realization of additional cash flow, after repayment of any financing costs, is dependent upon the project generating energy savings that can be captured through the HUD subsidy calculations.

HUD calculates the public housing operating subsidy for each public housing site using a formula-based project expense level (PEL); then adding the actual cost of authority-paid utilities, typically water and common area electricity (this is the Utility Expense Level or UEL); and subtracting tenant paid rents. When a housing authority enters into an EPC, its UEL is frozen at its **pre-EPC** utility consumption level. This base remains frozen over the life of the project and is called the Frozen Rolling Baseline or FRBL. As actual consumption declines due to newly-installed measures, the difference in utility costs between the actual and frozen consumption levels constitutes a part of the savings which are used to pay for the cost of the measures.

In the case of tenant-paid utilities, such as individual apartment electricity, SWHA provides tenants an allowance that reduces the rent they pay, such that the total tenant payment for both rent and utilities is approximately 30% of tenant income. Preliminary post installation utility allowance schedules for this project indicate that the SWHA-provided allowances will decrease between $5 to $13 per month, depending on unit size. As a result, tenants will be asked to pay slightly more in monthly rent once the project is implemented. As an EPC housing authority, HUD will then SWHA to exclude that increase in rent in calculating subsidy eligibility. This HUD incentive results in the housing authority receiving a subsidy equal to the differential between the old and new utility allowances, which can also be used by SWHA to pay for measures.

The amount of savings produced by these HUD incentives is sensitive to various factors that could become risks to additional project cash flow. These include the significant changes in utility rates (outside of the parameters utilized to calculate savings) and pro-rations in public housing operating subsidies by Congress., These risks have been anticipated in planning the project. Mitigations are built into the project design and conservative assumptions are being utilized in projecting actual savings:

- A large amount of the calculated savings will be due to the Frozen Rolling Baseline incentive associated with the EPC Phase I measures that are already installed. SWHA is currently achieving these results, so unless consumption levels rise unexpectedly or utility rates actually decrease from 2016 levels, these savings are already known.
- Once approved by HUD, the Resident Paid Utility Incentive (RPUI) can be requested annually without additional documentation.
- Regarding the impact of inadequate Congressional appropriations: the project has been stress tested at an 85% pro-rate, which has been the average pro-ration over the past few years. SWHA will enter into a Monitoring and Verification contract for the remainder of the EPC term to assure that measures are performing as planned and that future opportunities for savings are identified.

On-going Operational Risks: Risks associated with the installation of energy conservation measures include the actual efficacy of the measures installed, tenant behaviors or dissatisfaction that could impact consumption patterns and increased maintenance costs for the SWHA. Tenant concerns may include inadequate lighting levels from new fixtures, lack of familiarity with new heating technology, and increased noise from toilet installations. Maintenance concerns include possible increased maintenance requirements and replacement costs, and the need for staff training associated with more complex building elements such as energy recovery ventilators and vacuum-assisted toilets. In mitigation:

- After extensive vetting by experienced KCHA maintenance and weatherization staff, KCHA has completed the installation of the same or similar JCI-recommended products in over 800 units. Based on early survey and anecdotal evidence, we believe these products are being readily accepted by the great majority of KCHA residents and staff and are working as expected. Good communication and training on products through the use of mock-ups have been helpful in reaching this overall acceptance by staff and residents.
- At over $50,000, the replacement reserves included in the project are believed to be adequate; there are likely to be future opportunities to increase the reserves within the project, if desired. With the exception of the furnaces, the measures, such as LED lighting, have fairly low replacement costs. After approximately one year of using these measures, KCHA has experienced no issues.
- KCHA will train maintenance staff on how to replace failed equipment and will ensure warranties on installed measures are understood. In addition, maintenance manuals for the new ECMs will be provided. This training will emphasize correct product replacements because non-standard replacements are unlikely to support the expected savings for the project.

Financing: The primary risks associated with financing are the availability of willing lenders with acceptable terms, the cost of early termination of the loan and interest rate exposure:

- KCHA is making an internal loan to its own energy performance project for 20 years at a fixed 5% rate with no prepayment fees and intends to advance sufficient funds to SWHA under the same terms and conditions. Financing should be in place before the end of 2017 so construction can kick off by year end and should not be in an amount that exceeds $750 thousand. All financing will be retired through anticipated project cash flows.
- As in typical projects with financing, debt service will be paid first out of available cash flow as a project cost, with excess amounts available to SWHA to fund capital and operating needs.

The Board will have the opportunity to review and approve the final debt structure prior to any commitment by SWHA.

Executive Summary

May 26, 2017

Johnson Controls Public Housing Team has worked with King County Housing Authority (KCHA) staff to extend the term of the Sedro-Woolley Housing Authority (SWHA) EPC contract from 12 years to 20 years and to optimize the benefits of each incentive under the program.

Utilizing the HUD Energy Performance Conservation (EPC) incentives, the program can deliver quality of life improvements for residents, reduction in energy consumption, and long-term financial stewardship of public funds.

This project summary presents the improvements to SWHA's properties that will be implemented pending HUD approval and authorization by the SWHA board.

The primary purposes to extend:

1. Implement Energy Conservation Measures (ECMs) that will provide the maximum energy savings to SWHA and reduce maintenance/operational costs.

2. The ECMs will help SWHA make long-term upgrades, meet code requirements, improve resident comfort, and enhance the marketability of SWHA's properties.

3. Utilizing HUD incentives results in a self-funding program that generates significant income for non-EPC programs that benefit SWHA residents.

Through the proposed phase 2 extension, SWHA would realize an additional benefit of $709,073 to support the extended energy savings project.

SWHA can expect the following results:

- ✓ 2018 Annual utility / EPC combined incentive savings of $110,118
- ✓ Utility Rebate of $128,811 to offset debt service
- ✓ Up to $2 million in EPC incentive savings over the EPC extended term.
- ✓ A comprehensive project that fully leverages HUD EPC incentives.
- ✓ Ability to reprioritize capital dollars.
- ✓ Increased resident comfort and quality of life.

Project Objectives

Deliver Self-Funded Energy Solutions

The EPC Scope of Work developed for SWHA is entirely self-funded. The HUD incentives will be sufficient to cover all costs associated with: project debt payments, funding the replacement reserve, administrative fees, measurement & verification, and annual HUD reporting.

Achieve Significant Long-Term Savings and Benefits to Housing Stock

Measurable benefits include lower energy consumption and a reduction in utility costs. Above and beyond energy savings, KCHA and Johnson Controls team agree that benefits will extend to improved living standards, lower operational costs, and upgraded housing stock. In all, the project is expected to generate over the term of the contract savings, incentives of up to $1,824,399 and a onetime utility rebate of $128,811.

Obtain Consistent Levels of Occupant Comfort and Building Functionality

Resident comfort is a critical aspect of the project development process and was taken into consideration when including installation of the energy-recovery ventilator (ERV) in tenant units. An ERV will maintain proper levels of fresh air to reduce the likelihood of mildew or mold developing without increasing cost. The technology is an effective means of reducing energy cost for heating loads while providing a healthy environment.

Project Scope

- Installation of high efficiency furnaces units at Cedar Grove.
- Installation of high efficiency furnace for the common area at Cedar Grove.
- Installation of Energy Recovery Units (ERV) at Cedar Grove and Hillsview.
- LED lighting upgrades in all residential units for Cedar Grove and Hillsview.
- LED lighting upgrades in the common area at Hillsview.
- Water Conservation Measures, including high efficiency toilets, aerators, and low-flow shower heads at Cedar Grove and Hillsview.

New High Efficiency HVAC Systems

At Cedar Grove a total of 20 individual apartment natural gas furnaces will be retrofitted with 20 high efficiency furnaces. The retrofit also include the replacement of the common area heating system. This will be a significant upgrade to the existing aging and standard-efficiency equipment.

New Energy Recovery Units

A total of 80 ERV's will be installed, one per apartment, providing an energy efficient ventilation system with the intent to meet the requirements of the International Residential Code under the 2012 WASHINGTON STATE ENERGY CODE, RESIDENTIAL PROVISIONS.

Lighting Retrofit - Common Areas and Apartments

The existing lighting at SWHA is a mixture of incandescent and fluorescent lighting. The existing lighting systems will be retrofitted with long-lasting, energy-efficient LED fixtures and lamps resulting in immediate and ongoing cost reductions and improved quality of light (both brighter and of a natural color spectrum).

Water Conservation

The original program for water conservation included partial replacement low flow showerheads, aerators and complete capping of exterior hose bibs. The capping of the exterior hose bibs provided a remarkable reduction of water consumption by nearly 40%. There are still steps to take to further reduce the water consumption by replacing all existing toilets, showerheads and aerators at Cedar Grove and Hillsview with high efficient water fixtures.

Financial Overview

Code of Federal Regulations (CFRs) 24 CFR 990.185 governs the energy performance conservation program for public housing authorities where the project must be self-funding. The initial cash flow on the following page demonstrates that the proposed project will meet this requirement. The cash flow will also meet all HUD CFR requirements for EPC and incentive funding types. Each incentive has a not to exceed term of 20 years. The existing incentives do not all have the same start dates. The 20 maximum term per incentive by utility type was applied to SWHA cash flow, allowing existing incentives to be extended to 20 years and new requested incentives to continue over a full term of 20 years with an end date of 2036.

HUD EPC Incentives for the contract extension are Frozen Rolling Base and Resident Paid Utilities Incentives.

Phase 2 Extension Overview

Program Incentives	Utility Rebates	Total Program Benefits	Debt Service	Replacement Fund	M&V	Admin Costs	Subsidy Excess *
$1,824,399	$128,811	$1,953,210	$954,000	$50,615	$134,352	$267,699	$417,713

- The subsidy excess of $417,713 does not include utility rebate of $128,811.

Table 7 - Cash Flow - 100% All Phases								
Year	Funding Year	Annual Energy Savings	Annual Debt Payment	Annual M&V Fees	Replacement Costs	Maintenance Costs	Total Liabilities	Annual Cash Flow
Phase 1 – Siemens & Self Implemented								
1	2006	$5,861	$6,675	$0	$1,750	$6,289	$14,714	-$8,852
2	2007	$0	$8,009	$1,589	$1,750	$6,672	$18,020	-$18,020
3	2008	$24,126	$8,010	$1,636	$15,470	$7,197	$32,313	-$8,187
4	2009	$42,566	$8,010	$1,685	$15,470	$7,630	$32,794	$9,771
5	2010	$37,177	$8,009	$1,736	$23,107	$8,632	$41,484	-$4,307
6	2011	$43,854	$8,010	$1,788	$24,085	$9,046	$42,928	$926
7	2012	$46,321	$8,009	$1,842	$19,128	$8,946	$37,925	$8,396
8	2013	$53,534	$8,009	$1,897	$18,476	$9,399	$37,781	$15,753
9	2014	$53,739	$8,009	$1,954	$17,666	$9,689	$37,318	$16,421
10	2015	$43,889	$8,009	$2,012	$19,955	$10,989	$40,966	$2,923
11	2016	$63,805	$8,010	$2,073	$29,591	$9,250	$48,923	$14,882
Sub-Totals		$414,873	$86,770	$18,211	$186,446	$93,740	$385,166	$29,707
Phase 2 Extension – Self Implemented								
12	2017	$82,732	$22,000	$5,000	$1,471	$26,950	$55,421	$27,311
13	2018	$110,118	$72,000	$5,150	$1,515	$10,176	$88,841	$21,277
14	2019	$113,422	$72,000	$5,305	$1,640	$10,413	$89,357	$24,064
15	2020	$116,825	$72,000	$5,464	$1,823	$10,657	$89,944	$26,881
16	2021	$120,329	$72,000	$5,628	$2,997	$10,907	$91,532	$28,797
17	2022	$123,939	$80,000	$5,796	$3,087	$11,164	$100,048	$23,891
18	2023	$127,657	$80,000	$5,970	$3,180	$11,428	$100,578	$27,079
19	2024	$131,487	$80,000	$6,149	$3,275	$11,698	$101,123	$30,364
20	2025	$135,400	$80,000	$6,334	$3,374	$11,976	$101,684	$33,717
21	2026	$122,637	$72,000	$6,524	$2,206	$12,261	$92,991	$29,646
22	2027	$126,316	$72,000	$6,720	$2,272	$12,553	$93,545	$32,772
23	2028	$51,040	$20,000	$6,921	$2,340	$12,854	$42,115	$8,925
24	2029	$52,571	$20,000	$7,129	$2,410	$13,162	$42,701	$9,870
25	2030	$54,148	$20,000	$7,343	$2,483	$13,479	$43,304	$10,844
26	2031	$55,773	$20,000	$7,563	$2,557	$13,804	$43,924	$11,849
27	2032	$57,446	$20,000	$7,790	$2,634	$14,138	$44,562	$12,884
28	2033	$59,169	$20,000	$8,024	$2,713	$14,481	$45,217	$13,952
29	2034	$60,945	$20,000	$8,264	$2,794	$14,834	$45,892	$15,052
30	2035	$62,773	$20,000	$8,512	$2,878	$15,196	$46,586	$16,187
31	2036	$59,671	$20,000	$8,768	$2,964	$15,568	$47,300	$12,371
Extension		$1,824,399	$954,000	$134,352	$50,615	$267,699	$1,406,666	$417,733
Totals		**$2,239,273**	**$1,040,770**	**$152,562**	**$237,061**	**$361,439**	**$1,791,832**	**$447,441**

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Environmental Impact

Community Benefits

Based on the energy savings projected for this EPC, the following annual reductions in greenhouse gas emissions can be expected:

Approach	Reduction	Avoided Emissions: CO2*
Reduce Electric Consumption	638,800 kWh/year	730.0 tons/year
Reduce Natural Gas Consumption	4,972 Therms/year	43 tons/year
Reduce Water Consumption	1.1 Million gallons/year	
Total		**415 tons/year**

* All fossil fuel emission factors consider stationary combustion only.

Sources:

Electricity: 'Non-baseload output emissions rates" eGRID 2010 Version 1.1 files from EPA website: <http://www.epa.gov/cleanenergy/energy-resources/egrid/index.html>

Other emission factors: EPA Climate Leaders Guidance Documents. Direct Emissions from Stationary Combustion Sources. November 2007.

Energy Project GHG Calculator. USA Version 5.1. May 24, 2011.

Environmental Equivalents

The project's reduced emissions would be equivalent to:

CO_2 sequestered by	10,636	tree seedlings grown for 10 years in an urban scenario	
CO_2 sequestered by	94	acres of pine or fir forests	
CO_2 emissions from	76	passenger vehicles	
CO_2 emissions from	965	barrels of oil consumed	
CO_2 emissions from the *energy* use of	38	homes for one year	
CO_2 emissions from burning	2	coal railcars	

All carbon equivalencies extracted directly from the EPA website.

Reference Points for Incentive Types and Term

Cedar Grove					
FRBL				ADD-ON	RPUI
Electric	Gas	Gas	Water	Electric	Electric
Phase I	Phase I	Phase II	Phase I	Phase I	Phase I
2016 -2025		2017 - 2036	2008 - 2027	2006, 2008 - 2015	2016 - 2025
				Converted to FRBL in 2016	

Hillsview					
FRBL				ADD-ON	RPUI
Electric	Gas	Gas	Water	Electric	Electric
Phase I	Phase I	Phase II	Phase I	Phase I	Phase I & II
2016 -2025	NA	NA	2008 - 2027	2006, 2008 - 2015	2017 - 2026
				Converted to FRBL in 2016	

FRBL – Frozen Rolling Baseline Incentive

Pre-construction utility consumption levels are frozen for term of contract. Up to 100% usage savings + increases as utility rates rise.

ADD-ON – Add-on Incentive

SWHA received annual subsidy from HUD that was equal to the EPC annual contract costs for debt service only from 2006, 2008 to 2015. Converted to FRBL in 2016 based on 2006 utility rates.

RPUI – Resident Paid Utility Allowance Incentive

The utility allowance decrease and the rental increase provides for a formula income deduct where SWHA retains incremental rental revenue increase to repay debt service.

HOUSING AUTHORITY OF THE CITY OF SEDRO-WOOLLEY

RESOLUTION NO. 457

A RESOLUTION OF THE HOUSING AUTHORITY OF THE CITY OF SEDRO-WOOLLEY AUTHORIZING ITS EXECUTIVE DIRECTOR TO CAUSE THE WASHINGTON STATE DEPARTMENT OF ENTERPRISE SERVICES TO EXECUTE ON ITS BEHALF AN ENERGY SERVICES AGREEMENT

WHEREAS, in February 2017 the Board of Commissioners of the Housing Authority of the City of Sedro-Woolley (SWHA) adopted Resolution No. 455 authorizing SWHA to enter into an inter-local agreement with the Housing Authority of the County of King (KCHA) in order to use the KCHA procurement to retain Johnson Controls Inc. (JCI), a vendor pre-qualified with the Washington State Department of Enterprise Services (DES), to perform energy savings analyses; and

WHEREAS, JCI has completed an Investment Grade Audit (IGA) and identified projected savings from installation of energy conservation measures (ECMs) at SWHA properties and from incentives offered by the U.S. Department of Housing and Urban Development (HUD); and

WHEREAS, based on the results of the IGA, JCI has prepared an Energy Services Agreement (ESA), together with an EPC workbook and related materials to be submitted to HUD describing a project (Project) which, if approved, will allow SWHA to realize approximately $2.0 million over a 20-year period through installation of ECMs and HUD incentives; and

WHEREAS, subject to modifications made by SWHA and the final approval of the Executive Director, the scope of the Project shall be as reflected in the Executive Summary dated May 26, 2017 prepared by JCI; and

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COMMISSIONERS OF THE HOUSING AUTHORITY OF THE CITY OF SEDRO-WOOLLEY, THAT:

1. The Executive Director is hereby authorized to negotiate and approve the execution of an Energy Services Agreement, on SWHA's behalf, by DES in accordance with DES procedures, which ESA shall contain such terms and conditions as are customary in such transactions and as are deemed by the Executive Director to be in the best interests of SWHA.

2. The Executive Director is hereby authorized to submit the ESA, EPC Workbook and related materials to HUD for review and approval by HUD.

3. The Executive Director is hereby authorized to arrange permanent financing for the Project in an amount not to exceed $750,000, provided that the terms of such financing shall be subject to final approval of the Board of Commissioners at a later meeting to be scheduled.

4. The Executive Director is authorized to take such additional steps and to execute and deliver any approvals for the ESA and EPC Workbook and any and all related forms, affidavits and documents related thereto that the Executive Director determines to be necessary or advisable to give effect to this resolution.

5. All actions heretofore taken by the Commissioners, officers or agents of SWHA in connection with energy performance and energy savings planning and contracting are hereby ratified, approved and affirmed.

6. The Executive Summary dated May 26, 2017 prepared by JCI in connection with the Energy Services Agreement is attached hereto and made a part hereof.

ADOPTED AT A SPECIAL MEETING OF THE BOARD OF THE COMMISSIONERS OF THE HOUSING AUTHORITY OF THE CITY OF SEDRO-WOOLLEY THIS 2nd DAY OF JUNE, 2017.

THE HOUSING AUTHORITY OF THE CITY OF SEDRO-WOOLLEY, WASHINGTON

LAURIE FELLERS, Chair
Board of Commissioners

STEPHEN NORMAN
Secretary