
TO: CHAIR AND MEMBERS
FINANCIAL MANAGEMENT COMMITTEE

DATE: 2016 September 07

FROM: DIRECTOR PLANNING AND BUILDING

FILE: 4700 30

SUBJECT: EMERGENCY POWER AT SELECT KEY CITY FACILITIES

PURPOSE: To propose a framework for the future provision of emergency back-up power supply at select key City facilities to provide public access, service provision and centres for respite during extended power outages.

RECOMMENDATION:

1. **THAT** Council approve the emergency back-up power supply framework for select key City facilities, as outlined in Section 4.0 of this report.

REPORT

1.0 BACKGROUND

At its meeting on 2015 October 26, Council approved a report from the Financial Management Committee on the post August 29, 2015 wind storm event. The report included a recommendation that Council approve in principle a number of improvements and studies to improve future emergency response. Included in the proposed work program was a staff review of the advisability and feasibility of expanding the provision of emergency back-up power to select key City facilities throughout the city to provide public access, service provision and centres for respite during extended power outages.

In response, this report proposes a framework for the future provision of emergency back-up power supply at select City facilities.

2.0 POWER OUTAGES CAUSED BY THE WIND STORM EVENT

On Saturday August 29, 2015 a major wind storm struck the Lower Mainland. As a result of the storm's intensity, 500,000 BC Hydro customers in the region lost power, including almost 50,000 customers in Burnaby. Many Burnaby BC Hydro customers were without power for over 24 hours when power was restored at 8 pm on Sunday August 30. A further 1,197 Burnaby BC Hydro customers did not have their power restored until 9 am on Tuesday, September 1, (almost 69 hours without power).

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The storm affected a number of City facilities and services. Of the major recreation/community centres (Bonsor, Edmonds, Cameron, Eileen Dailly, Bill Copeland, Burnaby Lake and Confederation) only Bonsor Recreation Complex lost Hydro power; however, it continued to operate with emergency back-up power. Other facilities that lost power and were closed until Hydro power was restored included:

- Burnaby Village Museum
- Shadbolt Centre for the Arts
- Burnaby Art Gallery
- Kensington Park Arena
- CG Brown Pool
- Burnaby Mountain Club House
- Bob Prittie Metrotown Branch, Burnaby Public Library
- McGill Branch, Burnaby Public Library

Other facilities, including the Tommy Douglas and Cameron branches of the Library were not impacted and remained open.

3.0 EMERGENCY BACK-UP POWER

At its meeting on 2015 October 26, Council approved the recommendation that staff explore the advisability and feasibility of expanding the provision of emergency power at select key City facilities to provide public access, service provision and centres for respite during extended power outages.

3.1 Public Access and Continuity of Services

During power outages, emergency back-up power would allow key facilities to provide continued public access, service provision and places of respite to residents impacted by extended power outages. For example, continued operation of HVAC (heating, ventilation and air conditioning) systems would provide temporary relief to residents during a power outage that occurred during an extreme heat or cold weather event; continued operation of water systems would ensure running hot water in washrooms and showers; and uninterrupted power would offer somewhere for residents to stay connected to the community, including the ability to plug-in or recharge electronic communication devices. After the August 2015 wind storm event, Recreation staff reported increased patronage at facilities that remained open in areas where surrounding neighbourhoods were without power for an extended period.

3.2 Emergency Support Services

In addition to maintaining public access and service continuity during extended power outages, emergency back-up power would enhance the City's capacity to deliver Emergency Support Services (ESS) following an emergency or disaster by increasing the number of key facilities capable of supporting ESS operations in areas where Hydro power was interrupted. As such, a facility's suitability to serve as an ESS facility would be an appropriate consideration in seeking to identify key facilities for the potential installation of emergency back-up power.

It should be noted, however, that following an emergency or disaster, and before a facility is designated an ESS facility and mobilized as such, it must be deemed i) safe for occupancy (inspected, if appropriate), and ii) suitable for the intended use following a capacity and capability assessment. Only then would a facility be opened as an ESS facility and receive people impacted by an emergency or disaster.

Appendix 1 contains a list of existing civic facilities with emergency back-up power.

4.0 EMERGENCY POWER SUPPLY FRAMEWORK

The installation of emergency back-up power supply at key City facilities is a major capital investment. This section presents a phased approach to the provision of emergency power at select key City facilities. The framework considers both existing and planned facilities and the following criteria:

Geographic Distribution – for the framework, consideration was given to Burnaby’s growth management framework with the objective of providing Burnaby residents with reasonable access to facilities on foot, transit or by private vehicle. In Burnaby’s Official Community Plan, the city is divided into four geographic quadrants. Within each quadrant there is a higher density town centre. As distance from the town centre increases, there is a generally progressive decrease in population density toward single and two family neighbourhoods. The proposed emergency back-up power framework includes one major civic facility in each quadrant that is centrally located in relation to the quadrant’s population. It also includes a civic facility within the Civic Centre area that would be accessible to all Burnaby residents. This facility would be in addition to City Hall which was equipped with an emergency power generator in 2014.

Facility Suitability for Public Access and Potential Emergency Support Services – in proposing facilities to equip with emergency back-up power, the framework gave consideration to existing and future facilities and recommends facilities that would be well equipped to receive larger numbers of patrons during extended power outages and their potential to serve as an ESS facility, should they be needed during an emergency or disaster. The framework considered a facility’s existing or proposed site configuration, floor plan, occupancy, and on-site amenities among other criteria.

Sequencing – the framework gave consideration to existing and planned facilities and opportune timing for the installation of emergency back-up power as a major capital investment.

4.1 Proposed Framework

Based on the criteria presented above, it is proposed that the following framework be considered for the provision of emergency back-up power supply throughout the city.

<u>Location</u>	<u>Building Status</u>	<u>Facility</u>
1. Southeast	Existing	Edmonds Community Centre
2. Southwest	Existing	Bonsor Recreation Centre
3. Northeast	Replacement	Cameron Community Centre
4. Northwest	New	Brentwood Community Centre
5. Civic Centre Area	Existing	City Hall
6. Civic Centre Area	Existing/New	To be determined through further study

Information on these facilities is presented below.

Southeast Quadrant – Edmonds Community Centre

The new Edmonds Community Centre was opened in 2013. It is the largest civic facility in the southeast quadrant and includes multiple large open dry spaces, pool, multiple water closets and showers including accessible stalls, a residential kitchen, and easy access to transit and areas for public parking.

The facility has been pre-configured for emergency power with a generator pad and underground ducting installed. Since some of the infrastructure to accommodate an emergency back-up power generator is in place, it is proposed that the Edmonds Community Centre be reviewed for the feasibility and cost of installing an emergency generator, as a first priority.

Southwest Quadrant – Bonsor Recreation Centre

Bonsor Recreation Centre is the largest, centrally located civic facility in the City’s southwest and most densely populated quadrant. It includes multiple large open dry spaces, multiple water closets and showers including accessible stalls, a commercial kitchen, and easy access to transit and areas for public parking.

Bonsor is currently equipped with an emergency power generator to provide power for life safety systems only. It is proposed that the Bonsor facility be investigated further regarding an upgrade to its emergency power capabilities to allow for longer periods of continued operation than is currently possible. Bonsor would be the second priority in the framework.

Northeast Quadrant – Cameron Community Centre Replacement

The existing Cameron Recreation Complex and Library is identified for replacement as part of the Lougheed Town Centre Core Area Plan. With the approval of Council, a new facility would be built on the Cameron Park site with community amenity funds derived through density bonus

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opportunities in the Town Centre. The redevelopment of the Cameron Community Centre is projected to advance as new development occurs in the Town Centre.

The new centre is projected to be comparable in size with the Edmonds Community Centre. It is anticipated that the new centre will include a pool, significant dry space (gymnasium, multi-purpose rooms/studio space), washrooms with showers, kitchen facilities and administrative areas. A new Cameron Library is also approved by Council to be co-located on the site. The new facility would be the largest, centrally located civic facility in the northeast quadrant.

It is proposed that the provision of emergency power be considered through the design development and cost estimate process for a new centre in this location.

Northwest Quadrant – New Brentwood Community Centre

As part of the town centre development, a new community centre is planned for the Brentwood Town Centre site. It is proposed that the new facility be built through developers' contributions to the community amenity program. The new centre is projected to be comparable in size to the Edmonds Community Centre. The centre is anticipated to include significant dry space (gymnasium, multi-purpose/studio space), washrooms with showers, kitchen facilities and administrative areas, with aquatic programs continued to be offered through the Eileen Dailly Leisure Pool in Confederation Park.

It is proposed that provision of emergency back-up power be considered through the design development and cost estimate process for a new centre in Brentwood.

Civic Centre

An emergency back-up power generator was installed at City Hall main building in 2014. The generator is designed to supply power to the City Hall building and its related services.

In relation to continued public access, service provision and the provision of respite during periods of extended power outages, it is proposed that a further City facility in the Civic Centre area be investigated regarding their suitability for emergency back-up power. Potential facilities would include:

- City Hall – West Building
- Shadbolt Centre for the Arts
- Bill Copeland Sports Centre
- Potential future replacement facilities at C.G. Brown Pool and Burnaby Lake Ice Rink

5.0 NEXT STEPS

If Council approves the emergency power supply framework outlined in Section 4.0, it is proposed that as a next step, staff be authorized to develop the terms of reference for a feasibility study to examine the capital budget, siting and installation considerations of advancing an emergency power supply program. Specifically the study would:

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- determine cost and siting considerations of installing/upgrading emergency back-up power supply at the Edmonds and Bonsor Community Centres; and
- further investigate a suitable civic facility in Civic Centre area to install emergency back-up power; the feasibility study would also determine the cost and siting considerations of installing emergency back-up power at the identified facility.

It is also proposed that the provision of emergency back-up power be considered through the design development and cost estimate process for the proposed Cameron Community Centre replacement and the proposed new Brentwood Community Centre, as those projects advance through their respective Building programs.

6.0 RECOMMENDATION

To advance an emergency power supply program at select key City facilities, it is recommended that Council approve the emergency back-up power supply framework, as outlined in Section 4.0 above.

Should Council approve the recommendation, staff would develop the terms of reference for a feasibility study for an emergency power supply program at select key City facilities based on framework outlined in Section 4.0. The terms of reference of the feasibility study would be the subject of a future report to the Financial Management Committee and Council.


Lou Pelletier, Director
PLANNING AND BUILDING

MM/sa
Attachment

cc: City Manager
Deputy City Manager
Director Parks, Recreation and Cultural Services
Director Engineering
Director Finance
OIC, Burnaby Detachment RCMP
Fire Chief
Chief Building Inspector
Chief Librarian
Chief Information Officer
Emergency Management Program Coordinator

Appendix 1

City Facilities with Emergency Back-Up Power

FACILITIES	SITE ADDRESS	GENERATOR POWER SERVES:
BOB PRITTE METROTOWN LIBRARY	6100 WILLINGDON AVE	Fire pump & fire protection system, essential emergency lighting
SERVICE CTR - OPS OFFICE (MODULAR)	5780 LAUREL AVE	Partial Building – Core front office services, some offices, and radios
SERVICE CTR - OPS BLDG (TOWER)	5780 LAUREL AVE	Partial Building – Dispatch, Fuel Shed, and some offices
BONSOR RECREATION COMPLEX	6550 BONSOR AVE	Partial Building - Recreation Centre lights, safety systems (none on pool side)
CITY HALL GENERATOR BLDG	4949 CANADA WAY	Entire Building
WEST BUILDING	6151 DEER LAKE AVE	Partial Building - Emergency Lighting, Phone System, Mag locks, and some offices
BURNABY RCMP (JUSTICE BLDG)	6355 DEER LAKE AVE	Entire Building
FIREHALL #1	4867 SPERLING AVE	Entire Building
FIREHALL #2	7578 EDMONDS ST	Entire Building
FIREHALL #4	2326 DUTHIE AVE	Entire Building
FIREHALL #5	4211 E. HASTINGS ST	Entire Building
FIREHALL #6	3620 BRIGHTON ST	Entire Building
FIREHALL #7	3151 GILMORE DIVERSION	Entire Building
FIREHALL #3	6511 MARLBOROUGH AVENUE	Partial Building - Communications, emergency (lights and plugs) circuit through building
STILL CREEK WORKS YARD	4840 STILL CREEK DR	Entire Building - Operations Bldg & Storage Shop Bldg