

Swift No. 1 Hydroelectric Project
FERC Project No. 2111

FINAL LICENSE APPLICATION
Exhibit C – Construction History

PacifiCorp
Portland, Oregon

April 2004

TABLE OF CONTENTS

C.1.0 INTRODUCTION.....	1
C.2.0 CONSTRUCTION HISTORY	1
C.2.1 GENERAL DESCRIPTION	1
C.2.2 HISTORICAL OVERVIEW	1
C.2.3 SWIFT NO. 1 CONSTRUCTION HISTORY.....	2
C.3.0 CHANGES TO PROJECT FACILITIES SINCE CONSTRUCTION	3
C.4.0 PROPOSED CHANGES TO PROJECT FACILITY	3

APPENDIX

Appendix A. Report on Swift Dam construction (6/24/1958)

LIST OF TABLES

Table C.2.3-1. Chronology of progress of development and construction.....	2
Table C.3.0-1. Major capital additions to the Swift No. 1 Project.	3

PacifiCorp
Swift No. 1 Hydroelectric Project
FERC Project No. 2111

This page left intentionally blank.

C.1.0 INTRODUCTION

In compliance with the Code of Federal Regulations (18 CFR, Parts 4 and 16), PacifiCorp is applying to the Federal Energy Regulatory Commission (FERC) to relicense the Swift No. 1 Hydroelectric Project (FERC Project No. 2111) on the North Fork Lewis River, in the State of Washington. The current license for the Swift No. 1 Project, which PacifiCorp currently owns and operates, was issued on October 29, 1956 and expires on May 1, 2006.

PacifiCorp is applying for a new license to continue operation of the project. This Exhibit C presents the response to information required by the FERC as described in 18 Code of Federal Regulations (CFR) Section 4.51(d).

Exhibit C contains a history of project construction, including both initial construction and major modifications. Following this introduction, Section 2.0 describes the history of construction of the project. Section 3.0 discusses changes to the project since construction. Section 4.0 discusses proposed changes to the project facilities.

C.2.0 CONSTRUCTION HISTORY

C.2.1 GENERAL DESCRIPTION

The Swift No. 1 Hydroelectric Project is one of 3 PacifiCorp projects located on the North Fork of the Lewis River, approximately 28 miles east of Woodland, Washington and 53 miles northeast of Portland, Oregon. The site is approximately 40 miles upstream of the confluence of the North Fork Lewis River with the Columbia River. Located at RM 47, the Swift No. 1 Project is one of 4 facilities on the Lewis River. The other 3 projects are Yale (FERC Project No. 2071), Swift No. 2 (FERC Project No. 2213) and Merwin (FERC Project No. 935), all downstream of Swift No. 1. Swift Hydroelectric Project No. 2 is located at RM 44, Yale Hydroelectric Project is located at RM 34, and Merwin Hydroelectric Project is located at RM 19.5. Swift No. 1, Yale and Merwin are owned and operated by PacifiCorp. Swift No. 2 is owned by the Cowlitz County Public Utility District No 1 (Cowlitz PUD) and maintained and operated by PacifiCorp under contract.

C.2.2 HISTORICAL OVERVIEW

Investigation of the power production potential of the Lewis River date back to at least 1909 and site explorations were started as early as 1914. Northwestern Electric Company, a predecessor of Pacific Power and Light (PP&L), obtained a preliminary permit from the Federal Power Commission (FPC) to investigate the Yale Project site in 1922. In late 1928, Northwestern Electric Company filed an expanded application for a preliminary permit with the FPC to investigate a comprehensive development of four sites on the Lewis River: Ariel, Basket, Swift and Muddy Creek. Three of the 4 projects have been constructed and are now known as, respectively, Merwin, Yale, and Swift No.

1 and Swift No. 2 (initially proposed as a single project). The fourth project, Muddy, is no longer being considered for development.

C.2.3 SWIFT NO. 1 CONSTRUCTION HISTORY

Development of the Swift No. 1 Project began in 1952 when Pacific Power & Light filed an application for preliminary permit with the FPC. The license application was filed on December 30, 1955. In early May 1956, PP&L requested and received permission from the FPC to begin construction prior to license issuance. Construction began on May 8, 1956 and the project was in operation by December 31, 1958. The license was issued to PP&L for a 50-year period on October 29, 1956. The project was designed by the Bechtel Corporation and constructed by J.A. Jones and Chas. H. Tomkins Construction Companies. A detailed description of the construction history is provided in a paper published by the American Society of Civil Engineers (ASCE) titled "Swift Dam Construction" by Harris H. Burke on June 24, 1958 (Appendix A). A chronology of progress of development and construction is shown in Table C.2.3-1.

Table C.2.3-1. Chronology of progress of development and construction

Item	Date
Investigations into the Lewis River power production potential begin.	January 1914
Application for Preliminary Permit for development of four Lewis River Projects filed with the FPC	November 24, 1928
Application for Preliminary Permit for development of Swift Project filed with FPC	July 1952
Preliminary investigations of dam site below Swift Creek	May 17-24, 1954
Preliminary Permit for Swift Hydroelectric Project issued	October 12, 1955
License application filed with FPC	December 30, 1955
Pacific Power & Light files petition requesting pre-license authorization to commence construction prior to issuance of license	May 7, 1956
FPC approves Pacific Power & Light's petition requesting pre-license authorization to commence construction prior to issuance of license	May 9, 1956
Construction of diversion tunnel begins	May 8, 1956
Lewis River diverted through diversion tunnel	October 8, 1956
FPC issues license for Swift No. 1	October 29, 1956
Construction of Swift Hydroelectric Project begins	November 3, 1956
Diversion gate closed; Swift Creek Reservoir begins filling	September 29, 1958
Penstocks filled with water	December 4, 1958
Three turbine-generator units available for service	December 31, 1958

C.3.0 CHANGES TO PROJECT FACILITIES SINCE CONSTRUCTION

Since original construction, no major additions or modifications have been made to the project. A list of improvements and upgrades are presented in Table C.3.0-1.

Table C.3.0-1. Major capital additions to the Swift No. 1 Project.

Activity	Dates
Replacement of 3 transformers	2001
Upgrade of bearing cooling water system	1996
Installation of high oil lift system	1994
Replacement of cooling water flow sensors	1993
Replacement of powerhouse sump pump	1991
Unit 13 Rewind	Completed 1991
Rehabilitation of log boom on Swift Creek Reservoir	1990
Paving and re-fencing of Swift No. 1 viewpoint	1990
Unit 11 Rewind	Completed 1990
Installation of SNOTEL monitoring station on Mt. St. Helens	1989-1990
Domestic water system upgrade	1988-1990
Unit 12 Rewind	Completed 1987
Installation of cooling water intake screens	1986-1987
Intake rack debris removal	1987
Spillway gate protection	1985
Installation of strong motion accelerographs	1980-1981
Repair of powerhouse lift-out slab	1973

C.4.0 PROPOSED CHANGES TO PROJECT FACILITY

As part of this license application, PacifiCorp is not proposing any major modifications or upgrades. However, the Company will continue to evaluate the potential for project upgrades and modifications as future market and other conditions change, to ensure the most cost-effective, efficient and environmentally balanced use of the water resources available.

PacifiCorp
Swift No. 1 Hydroelectric Project
FERC Project No. 2111

This page left intentionally blank.