EXHIBIT NO. ___(EMM-28HC)
DOCKET NO. ___________
2005 POWER COST ONLY RATE CASE
WITNESS: ERIC M. MARKELL

BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

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|---|---|
| WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION,<br>Complainant,<br>v.<br>PUGET SOUND ENERGY, INC.,<br>Respondent. | Docket No. UE-_______ |

**TWENTY-SEVENTH EXHIBIT TO THE PREFILED DIRECT TESTIMONY OF ERIC M. MARKELL (HIGHLY CONFIDENTIAL) ON BEHALF OF PUGET SOUND ENERGY, INC.**

**REDACTED VERSION**

JUNE 7, 2005

PUGET SOUND ENERGY

# MEMORANDUM

**To:** Paul Wiegand

**From:** Joel Molander

**CC:** Eric Markell Wayman Robinett Ed Schild Kris Olin Rob Neate

**Date:** April 18, 2005

**Re:** Priest Rapids Project Contract Summary, Summary of Negotiations and Proposed Amendment No. 2

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In December 2001, Public Utility District No. 2 of Grant County (the "District") and twenty-two purchasers including Puget Sound Energy entered into three new power sales contracts. The new contracts replace the power sales contracts between the District and PSE, which expire on October 31, 2005 for the Priest Rapids Development and October 31, 2009 for the Wanapum Development.

## I. New Contracts – Summary Information

The three new contracts apply to the Priest Rapids Development beginning November 1, 2005 and to the Priest Rapids Project (combined Priest Rapids and Wanapum Developments) beginning November 1, 2009. The portion of the Priest Rapids Development and Priest Rapids Project allocated to the products offered through the new contracts may decline from year-to-year based on the District's use of an increasing share of both developments' firm capabilities to meet its load growth. PSE's percentage share of each product under the new contracts is defined in Exhibit A to the District's proposed Amendment No. 2 to the Priest Rapid Project Product Sales Contract (see attached).

A) **Priest Rapids Project Product Sales Contract:** This contract, effective for the Priest Rapids Development on November 1, 2005 and the Priest Rapids Project on November 1, 2009, defines terms and conditions for sale of the following products by the District to the Purchasers:

   1) **Surplus Product:** Priest Rapids Project output that is surplus to the needs of the District (slice product comprising firm and non-firm energy, pondage, ancillary benefits).

   2) **Displacement Product:** Priest Rapids Project Output that would otherwise be used by the District but for energy and capacity acquired by the District from Displacement Resources (currently BPA). The District has the right to reduce the amount of Displacement Product available to the Purchasers in order to meet its firm energy and capacity requirements; provided, however, that it has first used the Reasonable Portion proceeds as defined in C) below.

B) **Priest Rapids Project Additional Products Sales Contract:** This contract, effective for the Priest Rapids Development on November 1, 2005 and the Priest Rapids Project on November 1, 2009, defines additional terms and conditions that apply to the following product:

   **Non Firm Generation:** The portion of the Non Firm Generation available to the District from the Priest Rapids Project as and when such energy is available, as determined by the District.

C) **Priest Rapids Project Reasonable Portion Power Sales Contract:** This contract, effective for the Priest Rapids Development on November 1, 2005 and the Priest Rapids Project on November 1, 2009, defines additional terms and conditions that apply to the following product:

**Reasonable Portion:** The FERC has ordered the District pursuant to Public Law 83-544, legislation passed by the 83rd Congress authorizing the District to develop the Priest Rapids Project, to offer a "Reasonable Portion" of the Priest Rapids Project Output for sale. The "Reasonable Portion" is 30% of the Priest Rapids Project Output required by the FERC pursuant to Public Law 83-544.

The District has developed a marketing plan consisting of two phases to dispose of the Reasonable Portion. In the first phase, the Purchasers are given a Meaningful Priority in that a significant amount of the Reasonable Portion (24% of the 30%) is offered to them at a price to be set in the second phase. The second phase consists of selling the remaining Auctioned Power (6% of the 30%) on a market-wide basis, meaning that any qualified utility, power marketer or other power purchasing entity can bid. The bid sets the price for all allocations – including those allocations going to the Purchasers under phase 1, or the Meaningful Priority.

The Purchasers with Meaningful Priority receive their pro rata share of the Reasonable Portion net revenues. The District also has the ability to use the Reasonable Portion net revenues to meet its firm load requirement; provided, however, it has first exhausted its right to the Surplus Product under the Priest Rapids Project Product Sales Contract.

## II. Continuing Negotiations to Streamline Contracts

During the past 12-months, the District has collectively engaged the twenty-two Purchasers in discussions related to implementation of the new contracts. Discussions resulted in a collaborative negotiation toward streamlining the products and contracts, with primary focus on options related to the Priest Rapids Project Additional Products Sales Contract; specifically, terms and conditions under which the parties may agree to convert the Non Firm Generation available to the Purchasers through this contract into a slice product. Negotiations have culminated in a tentative agreement, which the District has presented to the Purchasers as Amendment No. 2 to the Priest Rapids Product Sales Contract.

The District's initial analysis resulted in a 15:1 conversion ratio of slice product to non-firm energy; i.e., a slice product is valued at fifteen times its non-firm energy component. Each of the Purchasers conducted its own analysis to ascertain a feasibility range for the conversion ratio and results converged to a range between approximately 6:1 and 9:1.

In August 2004, the District and Purchasers reached a tentative agreement to convert the Non Firm Generation to a slice product using a conversion ratio of 8:1, subject to approval of each Purchaser's respective executive management, board or commission. Approval is anticipated by all other participating Purchasers and the District, which, by letter dated March 17, 2005, presented its Conversion Amendment (Amendment No. 2 to the Priest Rapids Project Product Sales Agreement and Amendment No. 2 to the Priest Rapids Project Reasonable Portion Power Sales Contract) with a requested execution and return date of May 15, 2005.

## III. Amendment Effects and Benefits

Amendment No. 2 to the Priest Rapids Project Product Sales Contract as proposed by the District would incorporate into the Priest Rapids Project Product Sales Contract the calculation and conversion of the Non Firm Generation Product into an additional amount of Surplus Product and terminate the Additional Products Sales Contract. The effects and benefits of converting the non-firm energy into a slice product include:

A) A guaranteed slice product associated with the Priest Rapids Project over the term of the Project's new FERC license in lieu of possible consumption in its entirety of the Purchasers' current Surplus Product slice by the District, resulting in only non-firm energy available to the Purchasers. If the amendment is executed, long-term as well as daily planning may be conducted with more reasonable certainty for PSE's share of the Priest Rapids Project output. Additionally, the conversion ratio will be fixed and permanent over the remaining term of the new contracts.

B) Avoided interpretation differences, disputes and ease of slice product implementation compared to the Non Firm Generation product. Specifically, the District and Purchasers agree that lack of consensus and contractual ambiguity related to frequency of and requirements for non-firm energy interruptions have the potential to be the most disruptive, contentious and potentially litigious aspects of the Additional Products Sales Contract. Additionally, the District and Purchasers will no longer be required to develop and maintain deviation accounts and records of scheduled non-firm versus delivered energy, and real-time staff will not have to acquire a replacement schedule in the event of an interruption.

## IV. Analysis Assumptions and Results

Each of the Purchasers conducted an independent analysis of the conversion proposal presented by the District. PSE's assumptions and results are provided below.

A) Assumptions:

- 20-year discounted cash flow methodology used to determine an NPV-based conversion ratio.
- A non-firm energy value multiplier was calculated using the Dow Jones Mid-C Firm and Non-Firm index values for the periods 2002 and 2003. This coefficient captures the attrition in value due to the scheduling uncertainties of the Non Firm Generation product.
- A firming multiplier based on a $2,500 per MW-month cost was calculated for firming only heavy load hour non-firm energy, consistent with PSE's contemporary Least Cost Plan modeling assumptions.
- Aurora-6 was the basis for firm energy and pre-adjusted non-firm energy.
- BPA's PF-02 Demand Charge rate was used to value the Priest Rapids Project non-firm reserves.
- PSE's August 2003 Least Cost Plan simple cycle cost estimates were used as a proxy for developing a Priest Rapids Project capacity value.

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- Inflation was accounted for, where applicable, at 2.5% per annum.
- PSE's 8.76% WACC was used for discounting purposes.
- The District's power costs, including project O&M and debt service, were escalated at 2.5% per annum.
- Output from the Mid-Columbia river flow regulation model, dated April 2004, was used to calculate Priest Rapids Project energy and capacity net of encroachment and Canadian Entitlement obligations. The 1936/1937 water year was used for critical year planning and estimating firm/non-firm energy.

B) Results (reflecting the total Priest Rapids Project):

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Annualized Net Value of Slice (Benefits – Cost, rounded) [redacted]

Annualized Net Value of Non-Firm (Benefits – Cost, rounded) [redacted]

Value Ratio of Slice to Non-Firm [redacted]

Converting the Non Firm Generation Product to a slice product using an 8:1 conversion ratio results in a $30,648,750 annualized slice product net benefit to the Purchasers, shared pro rata, compared to the [redacted] annualized non-firm energy net benefit per PSE's calculated conversion. The conversion ratio was negotiated based on the range of values derived by each of the Purchasers, including the District, which varied from 6.5:1 to 15:1.

C) Example (for illustrative purposes only)

- *New Contracts – Pre-amendment:* The District's Reserved Share of the Priest Rapids Project is 36.5%; i.e., the share of both Priest Rapids Development and Wanapum Development reserved for the District's use. The District experiences load growth, requiring it to increase its share of the project's firm capability by 24% from 36.5% to 60.5%.
  - Under the existing Additional Products Sales Contract, the Purchasers would be entitled to purchase their pro rata share of the corresponding Non Firm Generation, or the non-firm energy associated with the District's 24% increase in slice product. The quantity ratio of slice product to non-firm energy is approximately 5:1 under normal hydro conditions. Accordingly, the Purchasers would receive their pro rata share of the 4.0% comprising non-firm energy (i.e., 20% of the 24% slice is firm, whereas 4% of the 24% slice is non-firm).
- *New Contracts – Post-amendment:* The District experiences load growth, requiring it to increase its share of the project's firm capability from 36.5% to 60.5%. The value ratio of slice product to non-firm energy is 8:1. The Adjusted District Reserved Share would be 0.605 – (0.605 – 0.365) / 8 = 0.575, or 57.5%.
  - Upon execution of Amendment 2 to the Product Sales Agreement and termination of the Additional Products Sales Agreement, the Purchasers exchange their pro rata share of the Non Firm Generation associated with the District's 24% increase in slice product for their adjusted pro rata share of slice product created by the

reduction in the Adjusted District Reserved Share; i.e., the Purchasers receive their pro rata share of the 2.5% reduction in the District Reserved Share (57.5% Adjusted District Reserved Share versus 60.5% Reserved District Share) as a slice product instead of non-firm energy. Converting provides the Purchasers with a slice product comprising firm and non-firm energy and capacity as well as ancillary benefits associated with the slice product.

– If the District's load requires it to consume the maximum amount of Surplus Product, the District would only be entitled to 65.81% of the Priest Rapids Project instead of the full 70.0% pre-amendment (excludes the 30% Reasonable Portion). The District's Adjusted Reserve Share calculation would be (0.70 – (0.70 – 0.365)/8 = 0.6581, or 65.81%. A 4.19% slice will be allocated to the Purchasers and shared pro rata per Exhibit A, Amendment No. 2 to the Priest Rapids Project Product Sales Contract.

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## V. Recommendations

A) Execute Amendment No. 2 to the Priest Rapids Project Product Sales Agreement based on the following considerations:

1) The negotiated conversion ratio (8:1) is within reasonable proximity of and economically consistent with the results of PSE's internal analysis [redacted]

2) PSE will avoid the potential for disputes and arbitration remedies related to the Additional Products Agreement by executing the amendment and conversion.

3) Conversion has gained significant momentum among the other Purchasers and each has indicated the intent to approve the amendments. The District has also made it clear from the onset of negotiations that amendment will require approval by all affected Purchasers (i.e., failure to approve by one Purchaser will terminate the conversion process for all). PSE's relationship with the District and other Purchasers will be adversely affected if it elects not to execute the amendments.

4) This is a one-time conversion without a re-opener clause to review valuation assumptions. By amending the contract PSE is committing to the conversion ratio of 8:1. Valuation assumptions will vary over time; however, the District and other Purchasers have resisted and effectively quashed the re-opener concept.

B) Execute Amendment No. 2 to the Priest Rapids Project Reasonable Portion Power Sales Contract.

1) This amendment affects a revised Exhibit A to the Priest Rapids Reasonable Portion Power Sales Contract for consistency with the revised Exhibit A, Amendment No. 2 to the Priest Rapids Project Product Sales Contract.

2) This amendment specifies dates by which the District is obligated to provide various information to the Purchasers for planning purposes.

# Public Utility District No. 2 of Grant County, Washington

*Presentation to*

**Purchasers**

**New Power Sales Contracts**
**&**
**PL83-544 Marketing Plan**

## How we got here.

- Legislation signed on July 27, 1954, authorizes the construction of the Priest Rapids Project. (Priest Rapids and Wanapum dams.)
- *"To assure that there shall be no discrimination between States …the licensee shall offer a reasonable portion of the power capacity and…power output [to] neighboring states…"*
- Fifty year contracts with 12 Purchasers originally satisfy this tenet.
- On March 2, 1995, Kootenai Electric Coop et al files a complaint with FERC, asking for a fixed assignment of the "reasonable portion" upon license and contract termination.
- ALJ issues an Initial Decision on December 9, 1996.

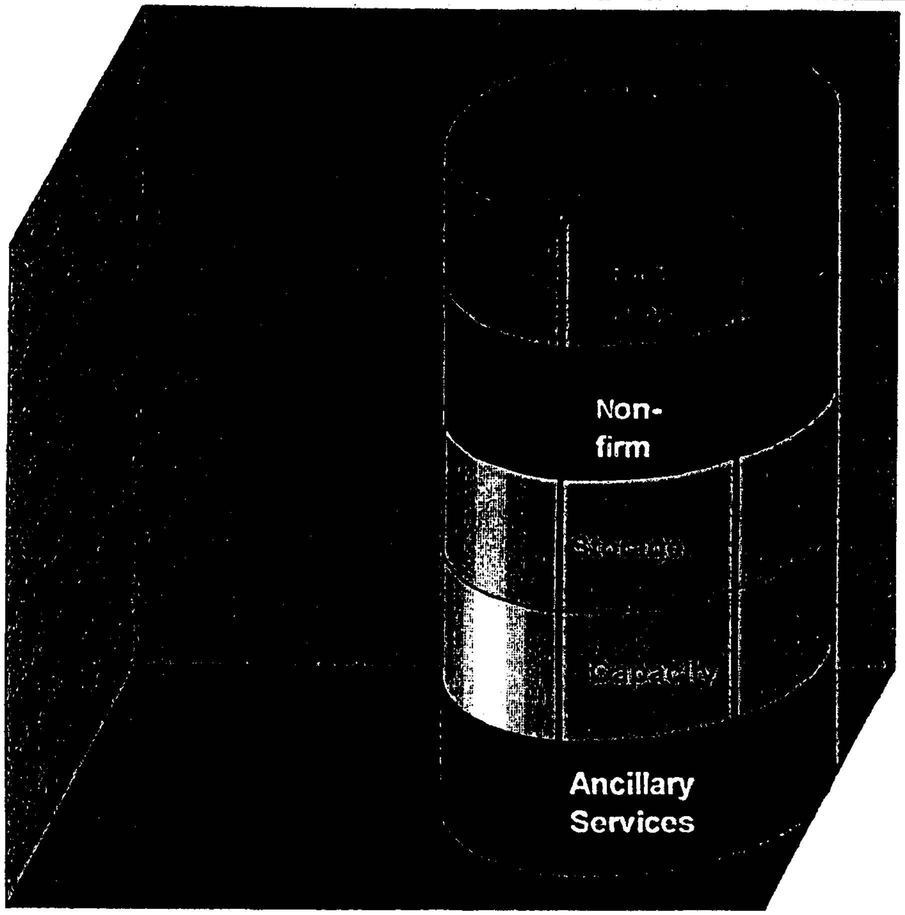
## Public Law 83-544 Marketing Plan

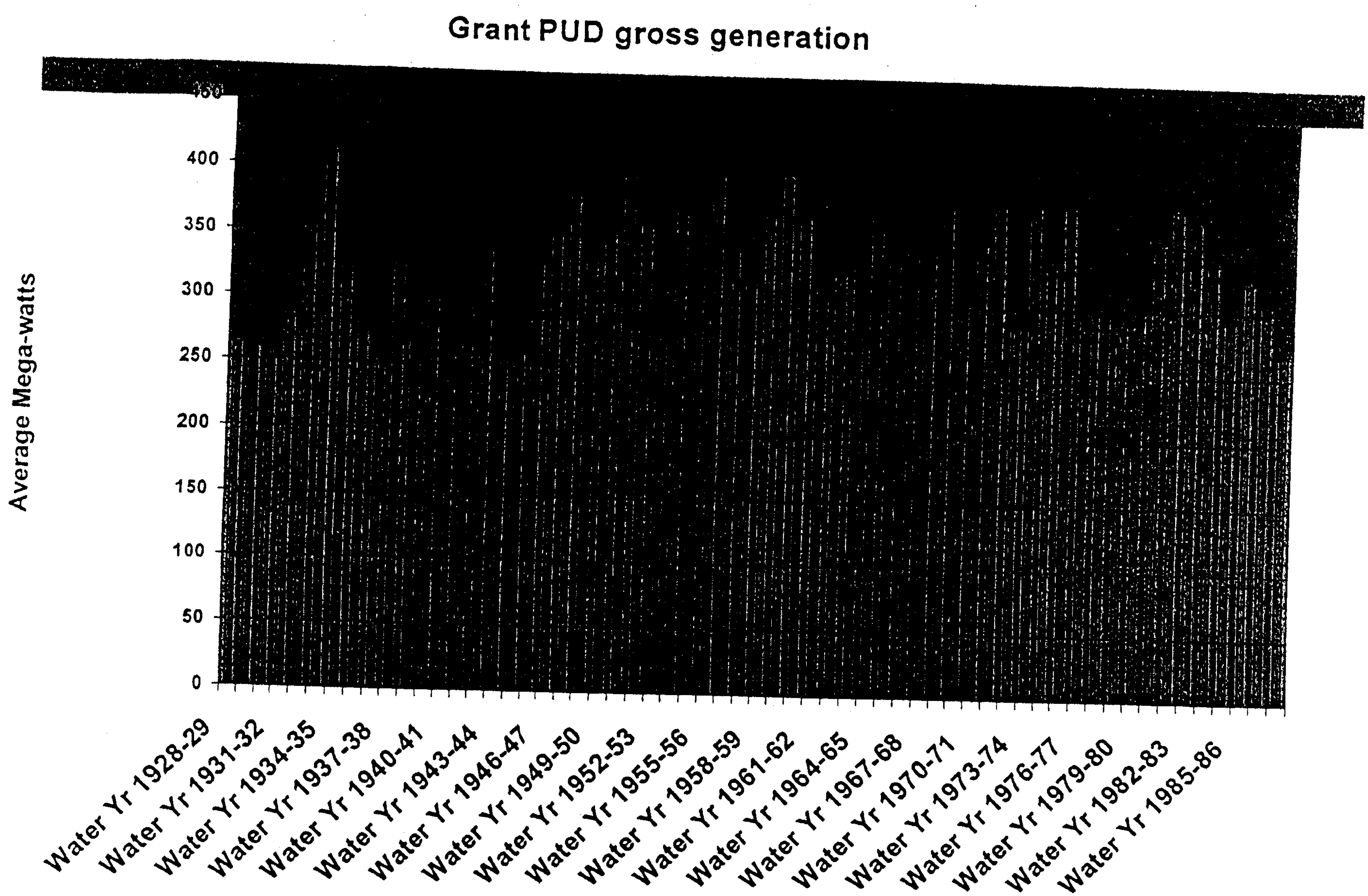
- On February 11, 1998, Commission issues its "Order Modifying Initial Decision", designating 30% as the Reasonable Portion, and describing a requirement to sell it.
- August 2001: Pacificorp and Yakama Nation announce the formation of Yakama Hydro, designed to file a competing application. YH actively pursues partners.
- 2001: The District offers contracts that have diminishing benefits for Purchasers who sign after 12/31/2001.
- December 2001: The District signs contracts with all 22 parties to the PL544 proceeding, including Pacificorp.
- October 2003: District files Final License Application and Marketing Plan.

# Where we are now.

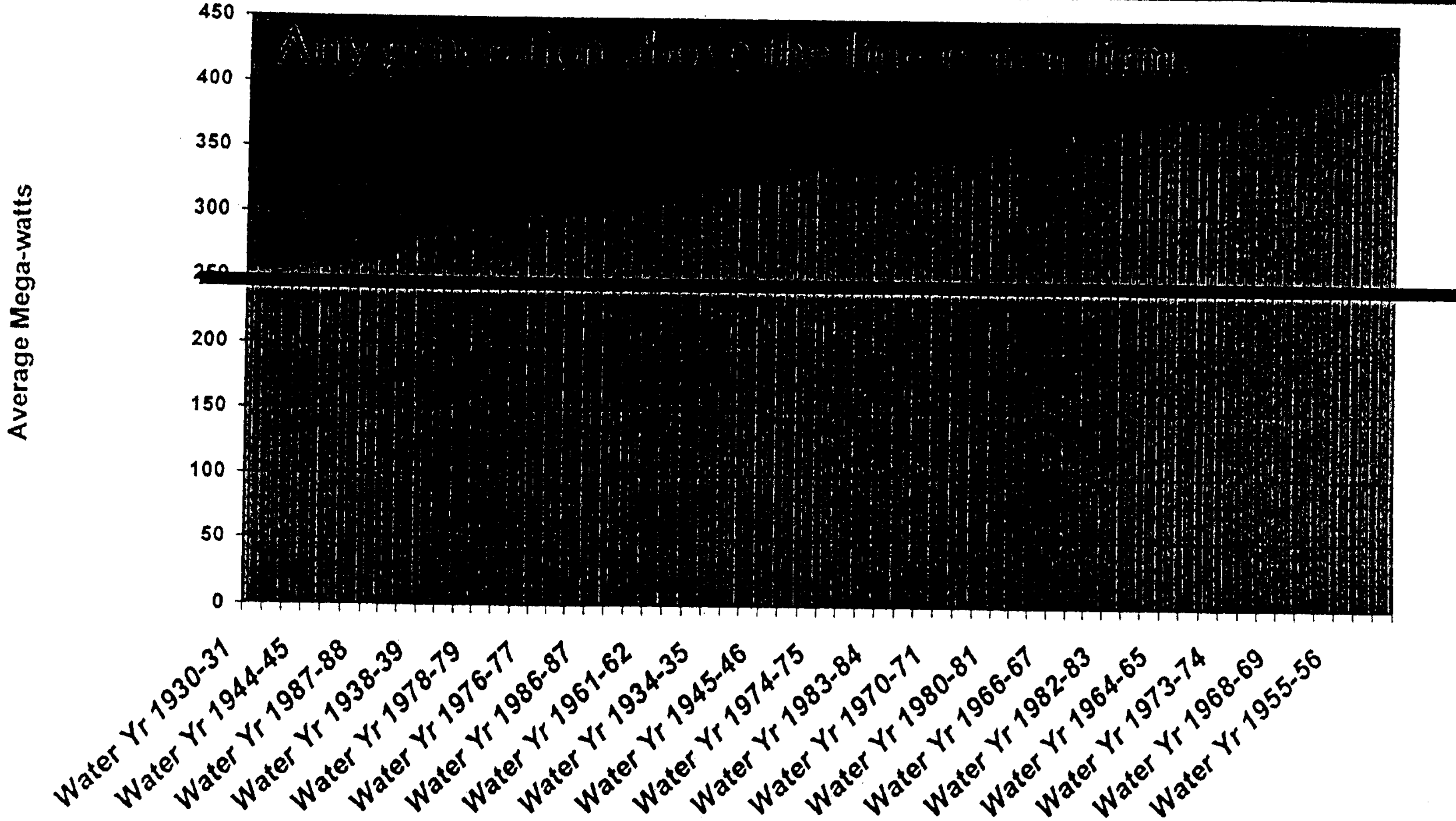
- **Current Power Sales Contracts**
- License expires on October 31, 2005 at midnight.
- So does the contract with the Purchasers of Priest Rapids dam.
- Contracts with Purchasers of Wanapum dam expire on 10/31/2009.

# Slice of cake concept




Grant PUD gross generation
Average Mega-watts
450
400
350
300
250
200
150
100
50
0
Water Yr 1928-29
Water Yr 1931-32
Water Yr 1934-35
Water Yr 1937-38
Water Yr 1940-41
Water Yr 1943-44
Water Yr 1946-47
Water Yr 1949-50
Water Yr 1952-53
Water Yr 1955-56
Water Yr 1958-59
Water Yr 1961-62
Water Yr 1964-65
Water Yr 1967-68
Water Yr 1970-71
Water Yr 1973-74
Water Yr 1976-77
Water Yr 1979-80
Water Yr 1982-83
Water Yr 1985-86

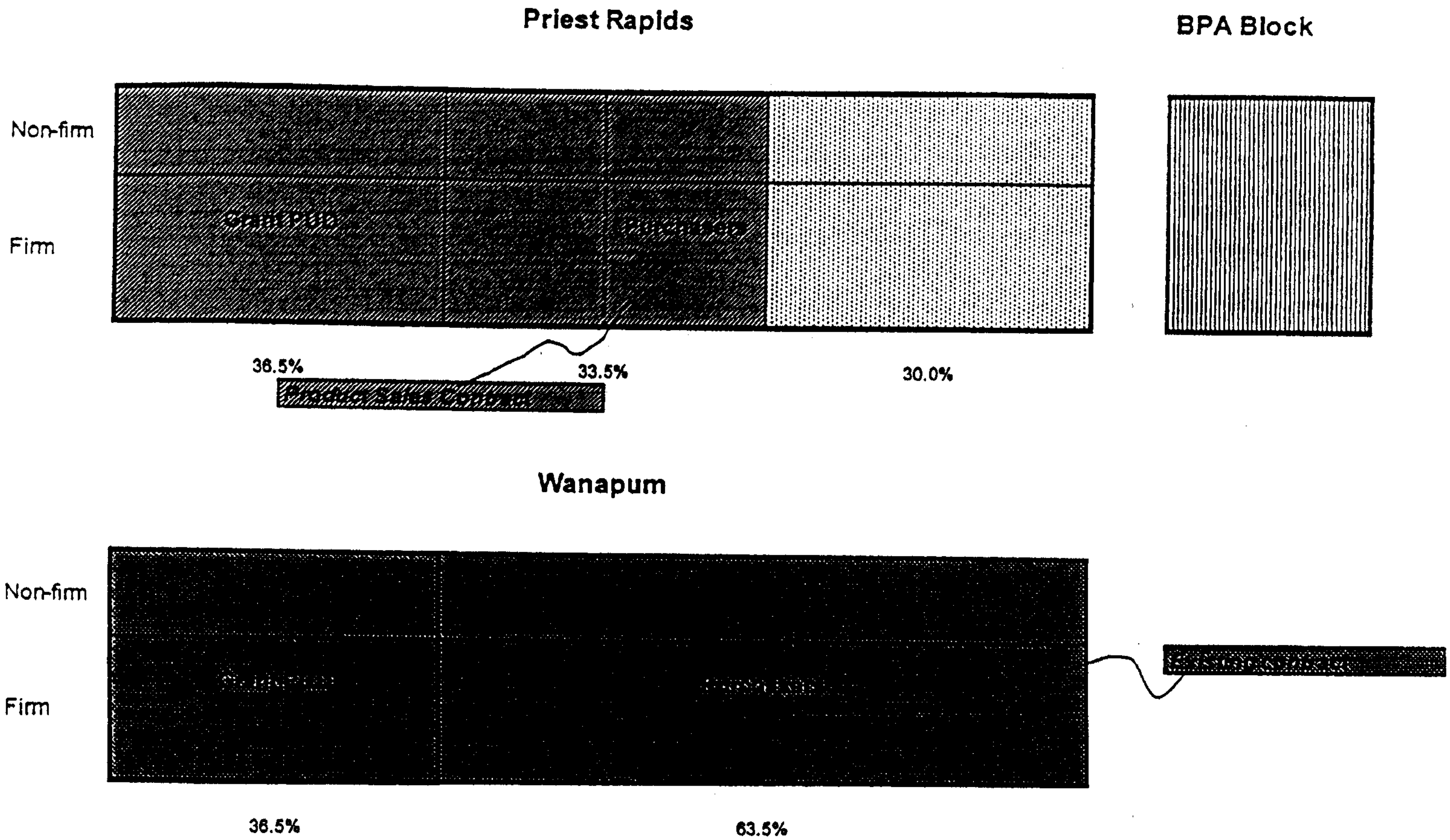
## Grant PUD gross generation (ranked)



# New Power Sales Contracts

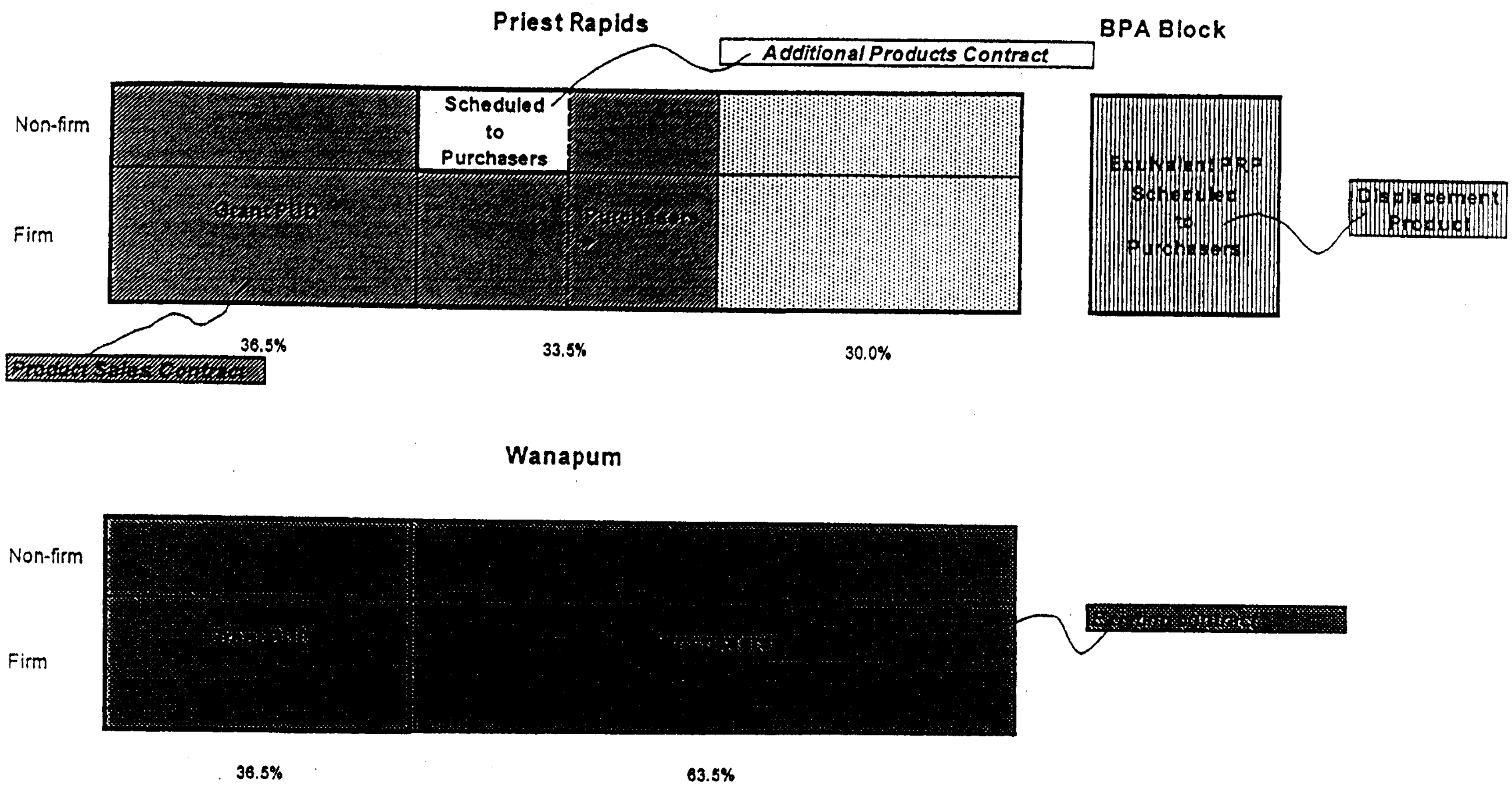
- New Power Sales Contracts with current twelve purchasers and ten new purchasers (all of them co-ops from Idaho) have been signed.
- There are 3 to 4 contracts with each of 22 purchasers, plus a marketing plan.
- *Generally** speaking, Purchasers:
  - 1: **Receive the difference between what is needed to meet Grants's firm load, and 70%. (Surplus Product)**
  - 2: **Receive a block of power at the BPA rate. (Displacement Product)**
  - 3: **Receive the non-firm that is greater than 36.5%, and less than 70%. (Additional Products)**
  - 4: **Receive the net revenues from the Reasonable Portion. (Reasonable Portion product)**
  - 5: **There are small, "equivalent value" changes to the contracts to make them simpler.**
- *Any Power Sales Contract statement has a host of qualifiers.

## Disposition of Grant Major Power Resources from 11/1/2005 through 10/31/2009



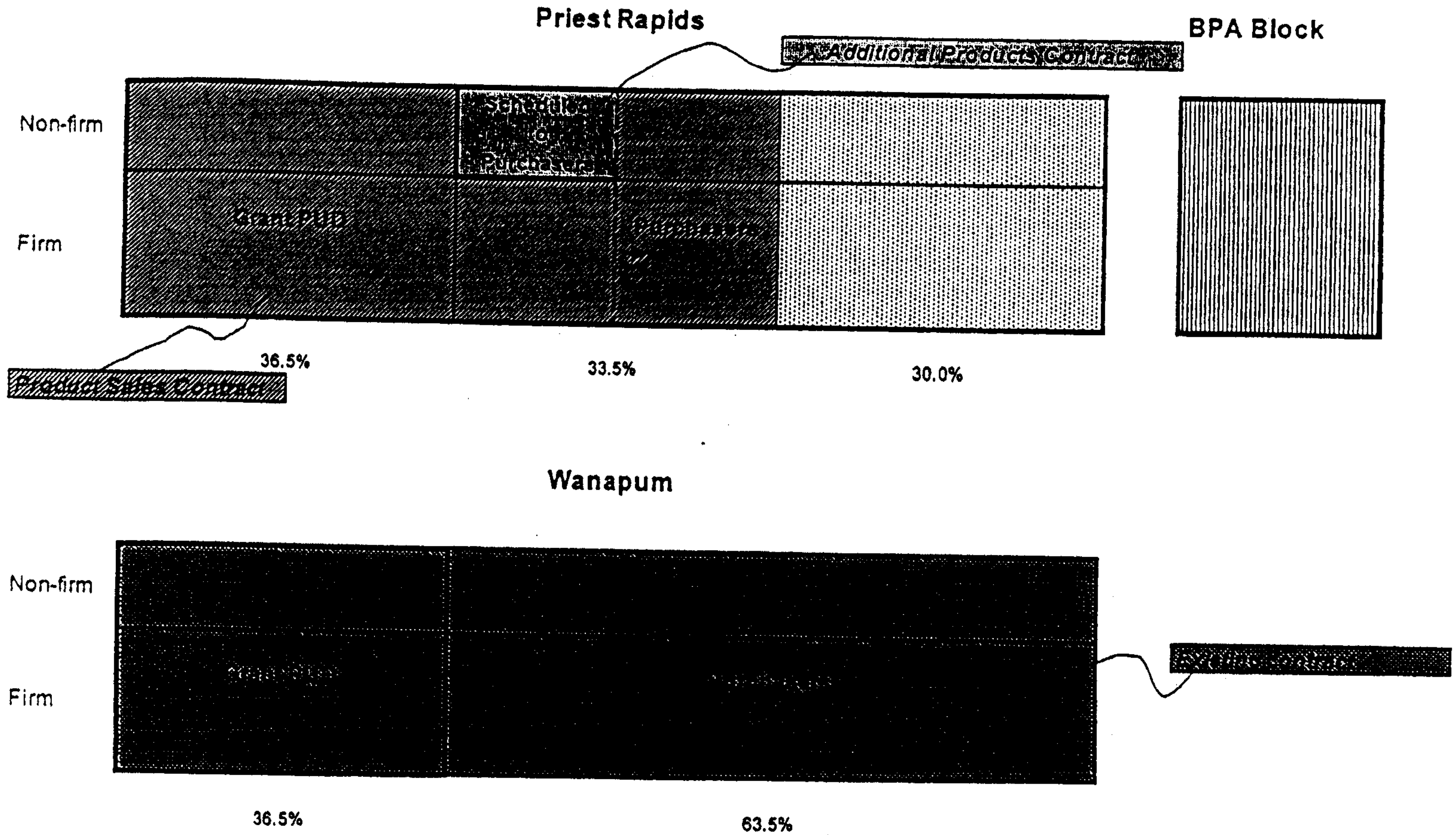

# 1: Purchasers receive the difference between what is needed to meet Grants's firm load, and 70%.

Disposition of Grant Major Power Resources from 11/1/2005 through 10/31/2009



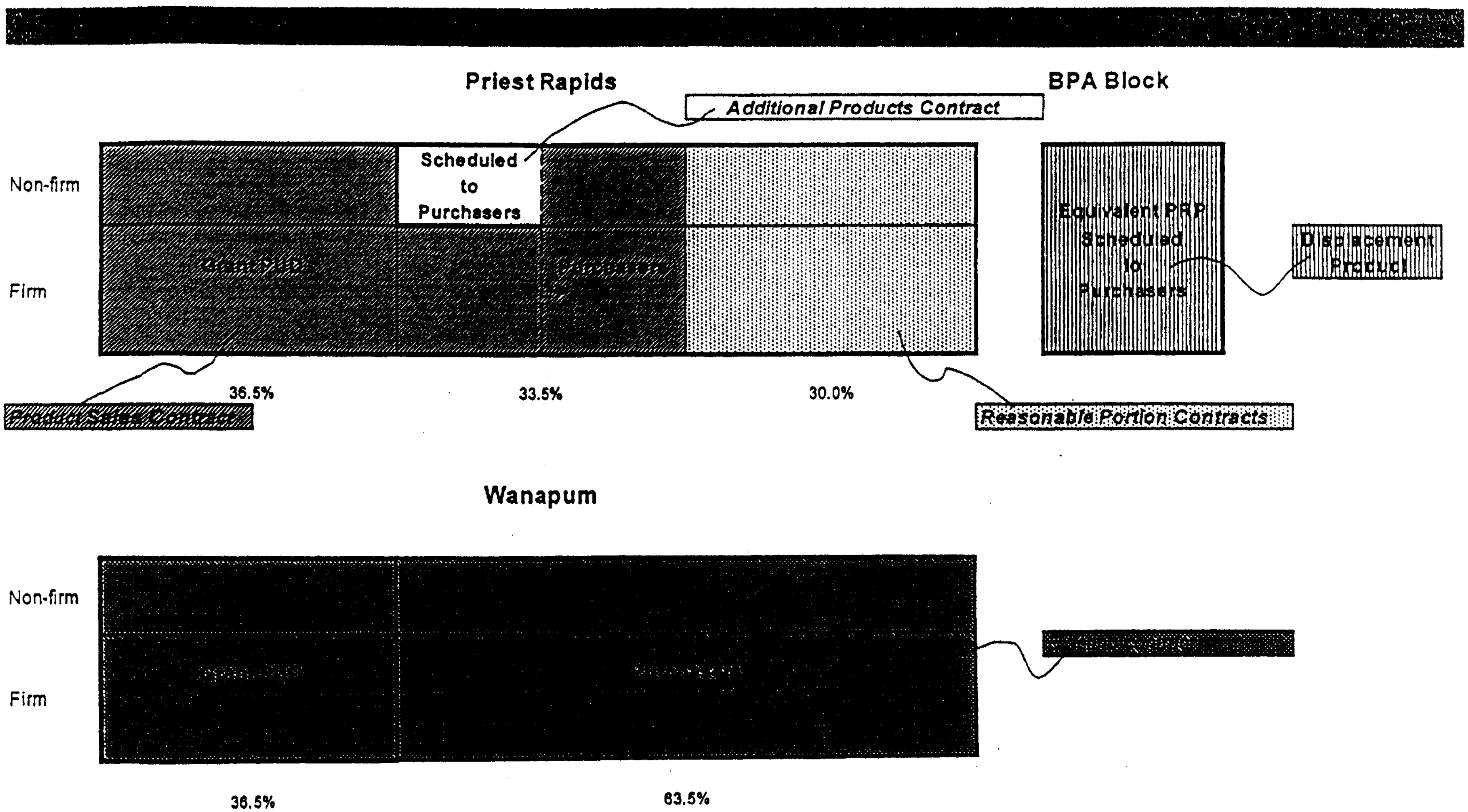

# 2: Purchasers receive a block of power at the BPA rate.

## Disposition of Grant Major Power Resources from 11/1/2005 through 10/31/2009



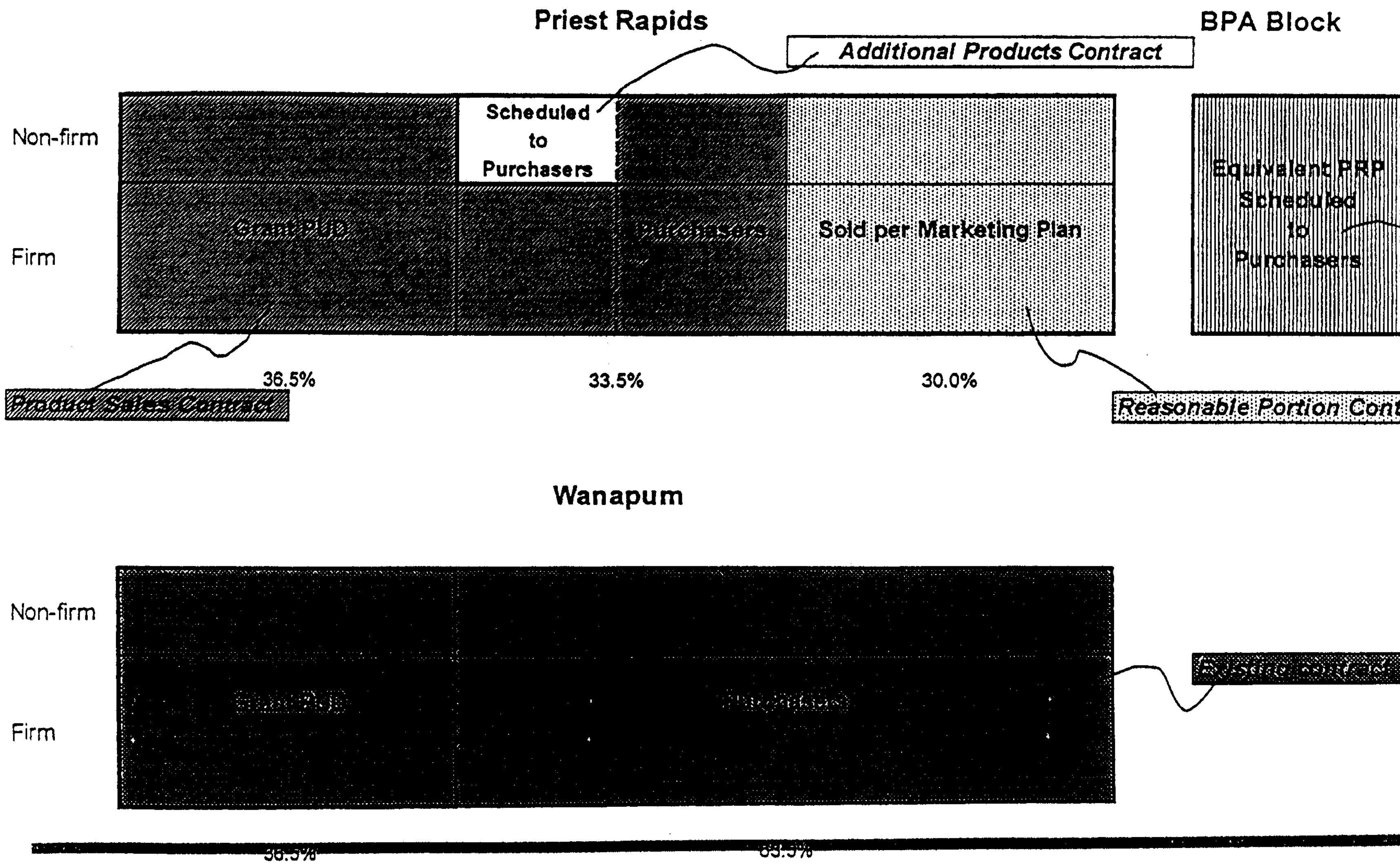

# 3: Purchasers receive the non-firm that is greater than 36.5%, and less than 70%.

## Disposition of Grant Major Power Resources from 11/1/2005 through 10/31/2009




# 4: Purchasers receive the net revenues from the Reasonable Portion.

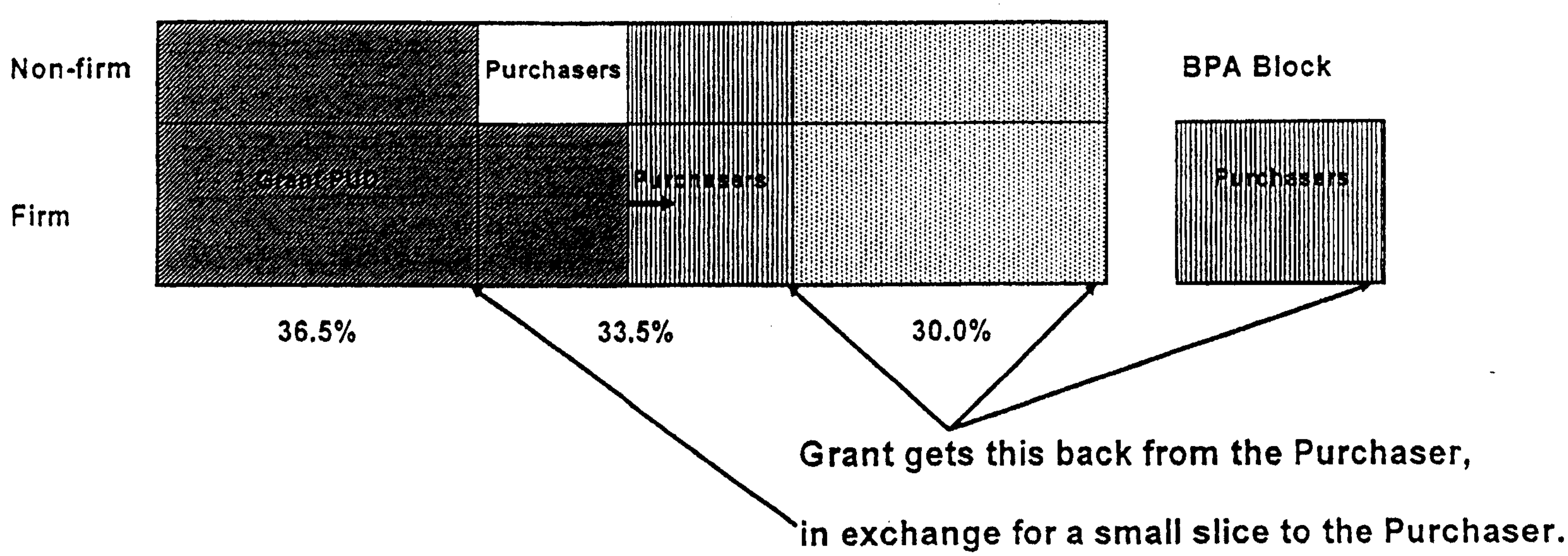
# Disposition of Grant Major Power Resources from 11/1/2005 through 10/31/20



# Step-up Provisions

- Seattle, Tacoma, and Kittitas are all signers to the Priest Rapids contracts, but not the Wanapum contracts.
- These three argued that, since the Priest Rapids resource was being re-allocated for the first four years, and that the Priest and Wanapum resource were going to be treated equal after 2009, that they were being treated unfair.
- The "Step-up" provisions give them "extra" for the first four years, for each product.
- For the Surplus Product, this is accomplished by allocating according to the 1959 contracts.
- For the Reasonable Portion, the extra is supplied by the District.
- For the Displacement Product, the extra is supplied by the District.

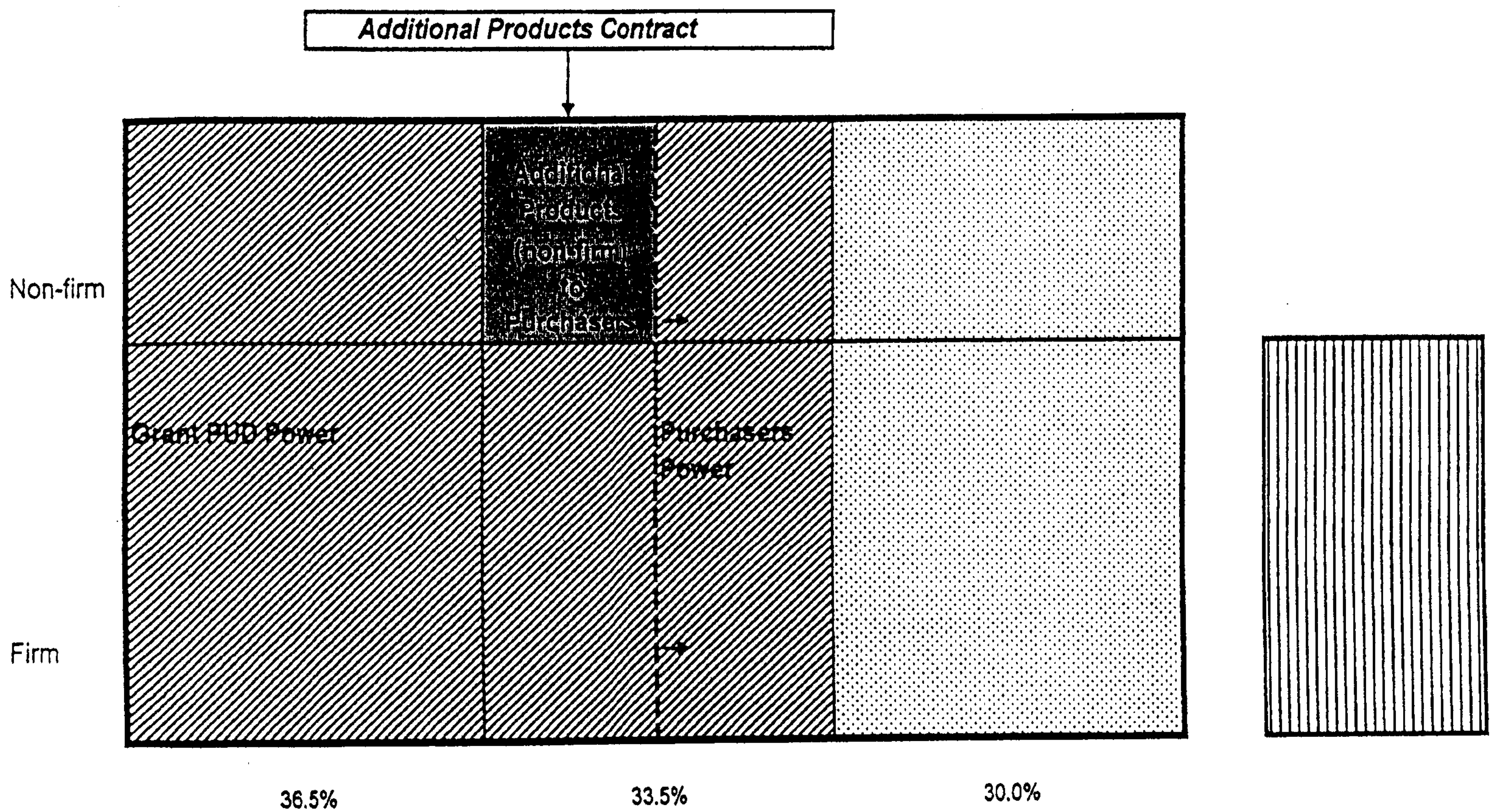
# Exchange Agreements




Total exchange slice to Purchasers is 2.41% of Priest Rapids from '05-09, and 2.48% of both Priest and Wanapum after 10/31/2009.

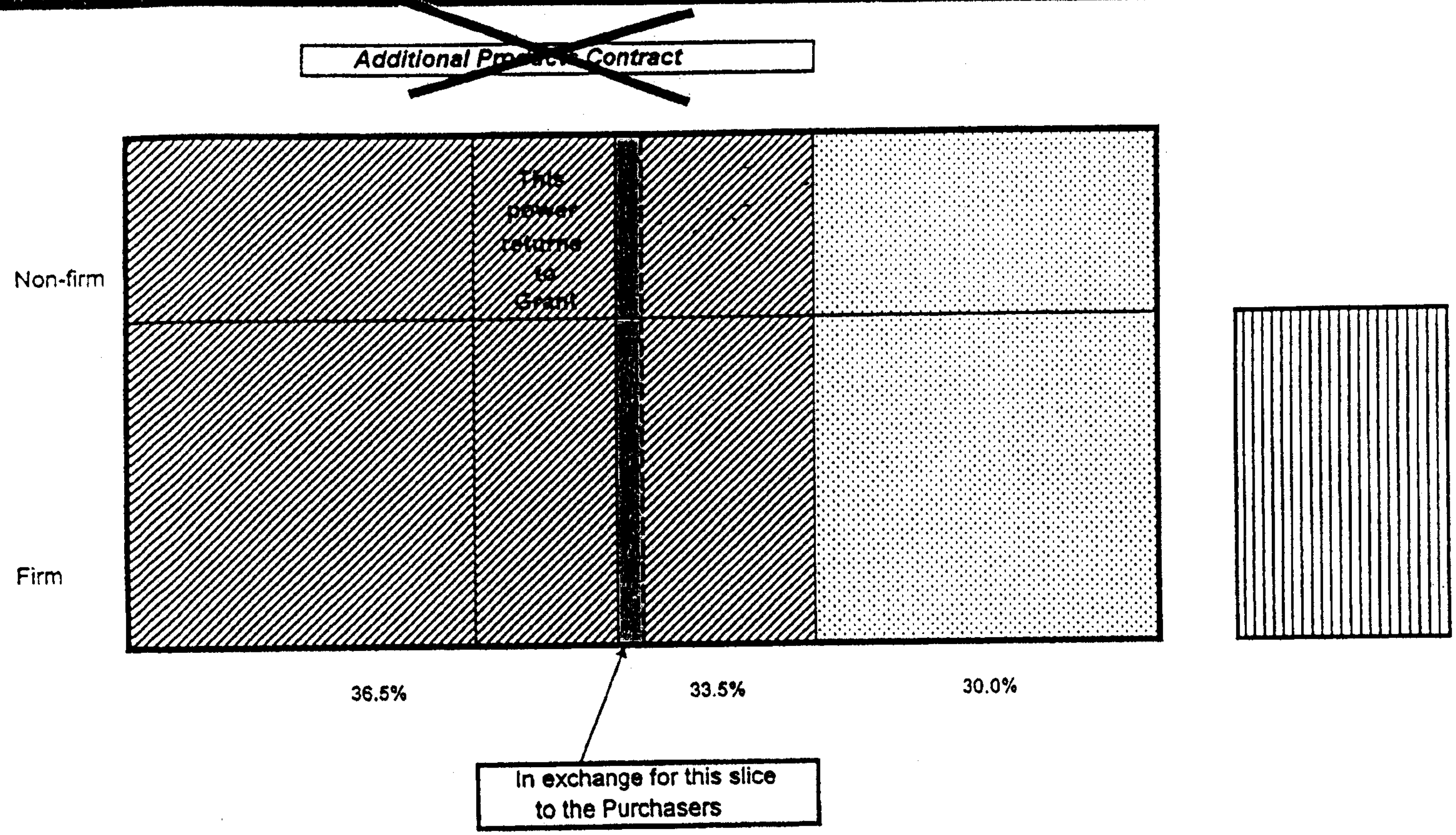
## 5: There are small, "equivalent value" changes to the contracts to make them simpler.

# Conversion Amendment




## 5: There are small, “equivalent value” changes to the contracts to make them simpler.

# Conversion Amendment




This slice grows to a maximum of 4.19% of Priest Rapids from 05-'09, then 4.19% of Priest and Wanapum after 10/31/2009.