Permanent Fund Protection Act

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Senate Finance Committee
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Basic Elements of SB26

The Permanent Fund Protection Act proposes:

1. A framework for sustainable withdrawals from the earnings reserve account (ERA) and

2. A sustainable dividend formula.

Presentation Overview

Part I:	The Permanent Fund's Role in a Solution
Part II:	Structure for Using the Permanent Fund
Part III:	Modeling Background
Part IV:	Draw Durability
Part V:	Dividend Durability
Part VI:	Fund Durability & Inflation Proofing
Part VII:	Fiscal Plan Impact

Part I

The Permanent Fund's Role in a Solution

Use of Permanent Fund Earnings

"This proposal, if approved, would amend the Constitution of the State of Alaska by … establish[ing] a constitutional permanent fund into which at least 25 percent of all [mineral royalties] received by the State would be paid. The principal of the fund would be used only for income-producing investments permitted by law and the **income from the fund would be deposited in the general fund of the State and be available to be appropriated for expenditure by the State** unless otherwise provided by law."

Ballot Proposition No. 2
Permanent Fund from Non-Renewable Resource Revenue
Constitutional Amendment

WHY USE PERMANENT FUND EARNINGS

FY18 Budget	$4.3 billion
FY18 Budget Gap	$2.8 billion
Potential Tools to Close the Gap	
Motor Fuels Tax Increase	$0.1
Broad Based Tax	$0.6
Oil Tax Credit Reform	$0.1
Max. Cuts Proposed (over 3 years)	$0.75
SB26 (net dividend)	$2.0

Part II

Structure for Using the Permanent Fund

Structure for using the Permanent Fund

1. Rule-Based Framework (Saving, Spending, Dividend)
2. Stabilize the Budget
3. Protect the Dividend
4. Protect the Permanent Fund
5. Maximize the use of the Earnings Reserve

STRUCTURE FOR USING THE PERMANENT FUND

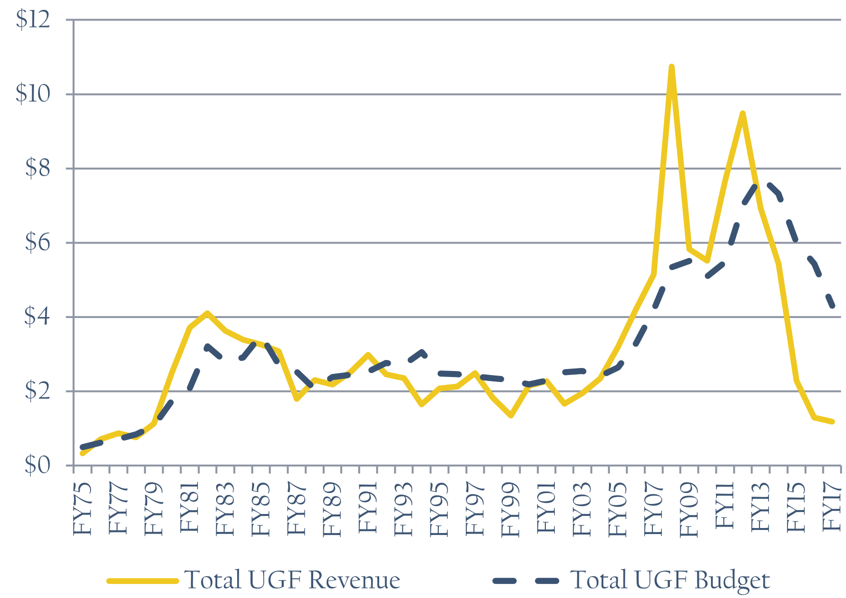
A plan to use the fund should be …

1. **Rule-Based** (Saving, Spending, Dividend)
   - Greatest threat to long term fund durability is unplanned withdrawals
   - Withdrawals need to occur under a set of statutory rules
     - Designed to protect the fund and guard against unsustainable uses
     - Ensure the ERA holds enough to bridge years of low earnings ("ERA durability")

Structure for using the Permanent Fund

A plan to use the fund should be …

2. **Stabilizing:**



- Over the long term, economies that experience repeated ups and downs grow slower than stable economies.
- Because commodity prices are volatile, economies dominated by a single commodity industry, like the petroleum industry, experience more (and more pronounced) cycles.
- Permanent Fund Earnings can play a central role in reducing four decades of boom and bust budgeting cycles.

Structure for using the Permanent Fund

A plan to use the fund should…

3. **Protect the Dividend**

   - Reflects the current and future economic realities of shrinking oil and gas tax revenue.
   - Recognizes that too large a dividend limits available options for full fiscal solutions.
   - Provides for a sustainable dividend for all generations of Alaskans.

Structure for using the Permanent Fund

A plan to use the fund should…

4. **Protect the Permanent Fund**

    - Meant to provide for funding state expenditures for all generations of Alaskans.
    - Maintain or grow the real (inflation-adjusted) value of the permanent fund.
    - Withdrawing too much is unsustainable and risks damaging the fund.

Structure for Using the Permanent Fund

A plan to use the fund should …

5. **Maximize the use of the Permanent Fund Earnings:**

   - As North Slope production declines, the fund's earnings will be increasingly important in eliminating the fiscal imbalance in order to sustain public services.
     - Similar to petroleum revenue, investment earnings can be highly variable.
     - Unlike petroleum, our financial reserves are a renewable resource.

   - Withdrawing too little limits future options for full fiscal solutions.

   - Other proposed new revenues and cuts could reduce the deficit by millions, the fund can *sustainably* contribute billions .

Part III

Modeling Background

Model Sophistication and Vetting

- Key aspects of the model
  - Probabilistic treatment of oil prices, oil production, investment returns
  - Focus on detail of how money flows between permanent fund, general fund, and dividends
  - Assumptions from objective sources
  - Monte Carlo simulations
- Vetted by McKinsey last year
  - Found no major mechanical errors, reasonable assumptions
  - Approved of Monte Carlo probabilistic method
  - Suggested improvements, some of which the Department of Revenue (DOR) has incorporated (for example, probabilistic oil production, autocorrelation)

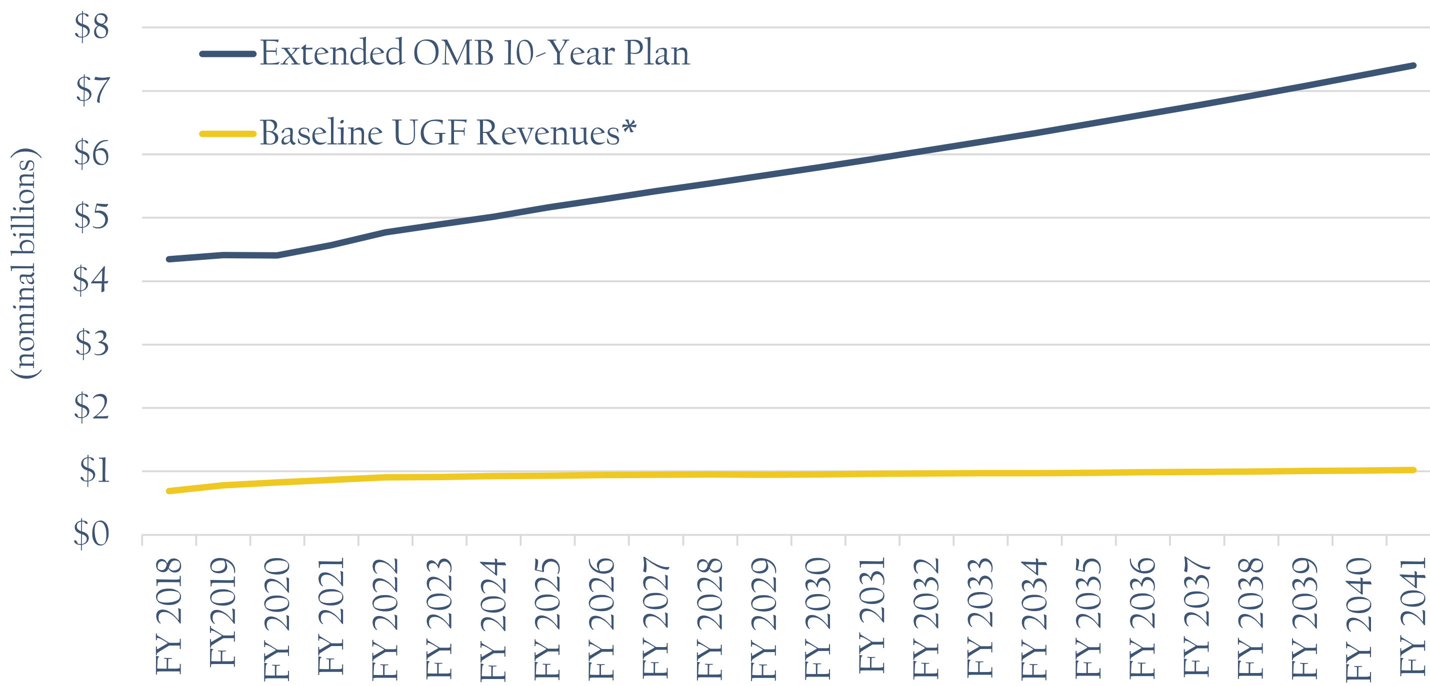
METHOD, INPUTS, AND ASSUMPTIONS

- **Permanent Fund Starting Value**: $54.9 billion
  - Realized portion of corpus: $37.9 billion
  - Realized portion of earnings reserve account (ERA): $9.7 billion
  - Unrealized earnings held by the fund: $6.3 billion
  - Starting value based on
    - APFC forecast for end of fiscal year 2017 (FY17), without inflation proofing transfer for FY17
    - Because APFC accounts for October 2017 dividends in FY17, scenarios starting with $1,000 per person dividends begin with a higher realized ERA balance of $10.6 billion and a total fund balance of $55.8 billion.
- **Investment Return**: Callan Associates' 10-year forecast
  - Total return: 6.95% geometric, 12.32% standard deviation
  - Statutory return: 6.24% mean, 2.24% standard deviation
  - Inflation rate: 2.25%

Method, Inputs, and Assumptions

- **Petroleum Revenues:**
  - **Oil price**: Probabilistic analysis of ANS oil prices using a PERT distribution from the fall 2016 price forecasting session.
  - **Production**: Probabilistic analysis of ANS oil prices using a PERT distribution from the DNR forecast in Fall 2016 RSB
- **CBR:** $4.4 billion beginning of year 2018 balance & a 2.25% rate of return.

Budget Assumptions



* <u>Baseline UGF Revenues</u>: DOR's Fall 2016 forecast for total UGF revenues, but without unrestricted royalties and production taxes. Production taxes and royalties are excluded from the baseline because they are included elsewhere in the model.

LAST SESSION'S WORK

Last year, the 29th Legislature held **39 hearings** on the Permanent Fund Protection Act (SB128, HB245, and SB5001):

- SSTA: 10 hearings, including 2 days of public testimony
- SFIN: 10 hearings, including 1 days of public testimony
- HFIN: 19 hearings, including 4 days of public testimony

Other bills addressing the use of permanent fund earnings were also considered:

- SB114: 7 hearings in SSTA, 9 hearings in SFIN
- HB303: 4 hearings in HFIN
- HB224: 4 hearings in HFIN

SB26 is a slimmed down version of the Permanent Fund Protection Act passed by the Senate last year. It is the same as the CS for SB128, but without provisions re.:

- CBR management
- APFC procurement
- Spending cap

PFPA: Scenario

- **Corpus Deposits:**
  - 25% of royalties
  - Any ERA balance over 4 times the full POMV calculation (after the current year draw) is transferred to the corpus (inflation proofing mechanism or “4 times” rule).
- **Draw Calculation:**
  - Maximum POMV: 5.25% of the average fund value in the first 5 of the last 6 years.
  - Draw Limit: The maximum POMV amount is reduced by $1 for every $1 that UGF royalties and production taxes exceed $1.2 billion.
- **Dividend Calculation:**
  - 20% of the maximum POMV payout before reductions, plus 20% of UGF royalties
  - Overwriting the above calculation, the October 2018 dividend is $1,000 per person (the 2017 dividend is reflected in the starting fund value)

Part IV

Draw Durability

POMV DRAW

- **5.25%** of the average fund value in the first 5 of the last 6 years
- Example: draw calculation for fiscal year 2018

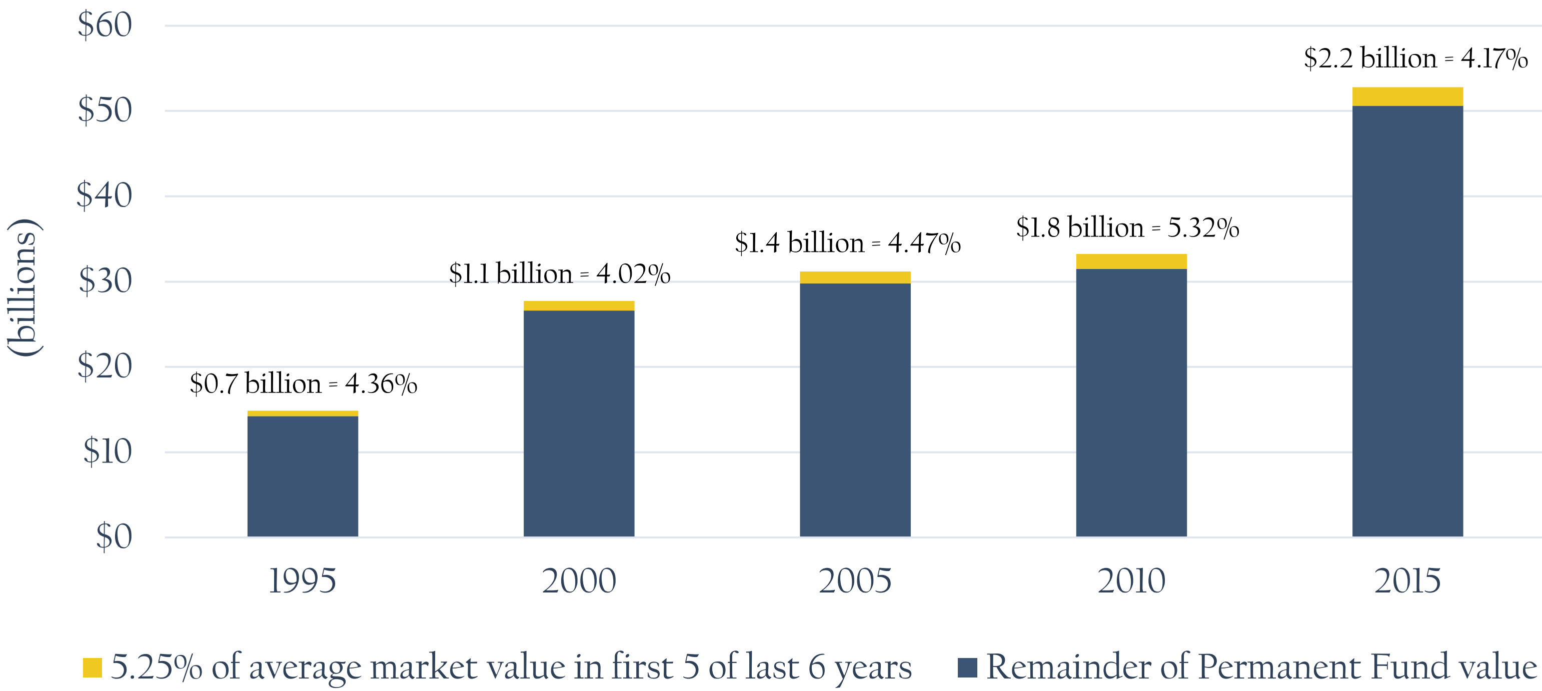
End of FY	Fund Value (billions$, excludes Am.Hess.)	
2012	$39.9	Average = **$48.1**
2013	$44.4	
2014	$50.8	
2015	$52.4	
2016	$53.1	
2017	$53.6	
2018	…	

- Average fund value in the first 5 of the last 6 years = **$48.1** billion
- 5.25% of $48.1 = **$2.5** billion
- Effective POMV: = **4.7%** of 2017 value

- Aggressive, but sustainable … *if* the draw limit is applied

The Effective POMV

Based on historic fund values, these "snapshot" POMV calculations demonstrate that, 5.25 percent of the fund's average market value in the first 5 of the preceding 6 years is generally less than 5.25 percent of the fund's current value.

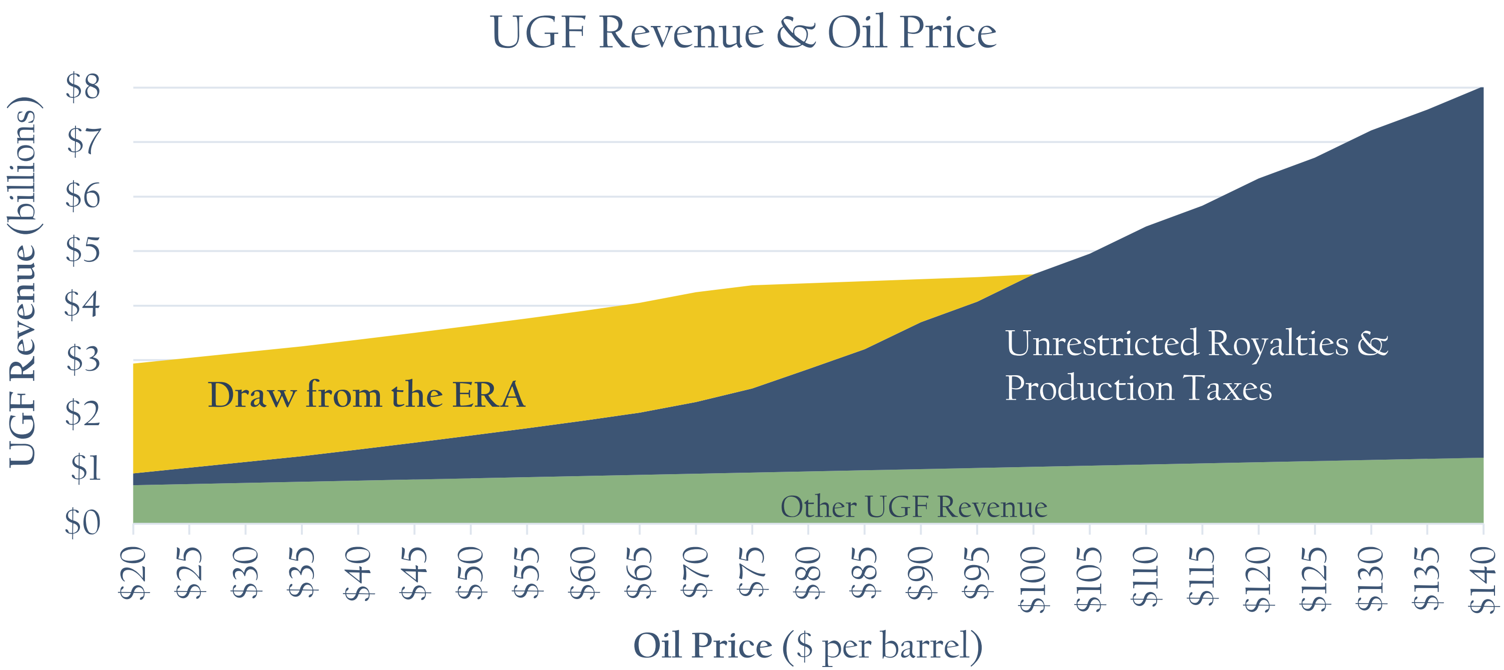


DRAW LIMIT

- Reduces the POMV draw by $1 for every $1 that UGF production taxes and royalties exceed $1.2 billion.

- Does not apply to the portion of the POMV going to dividends.

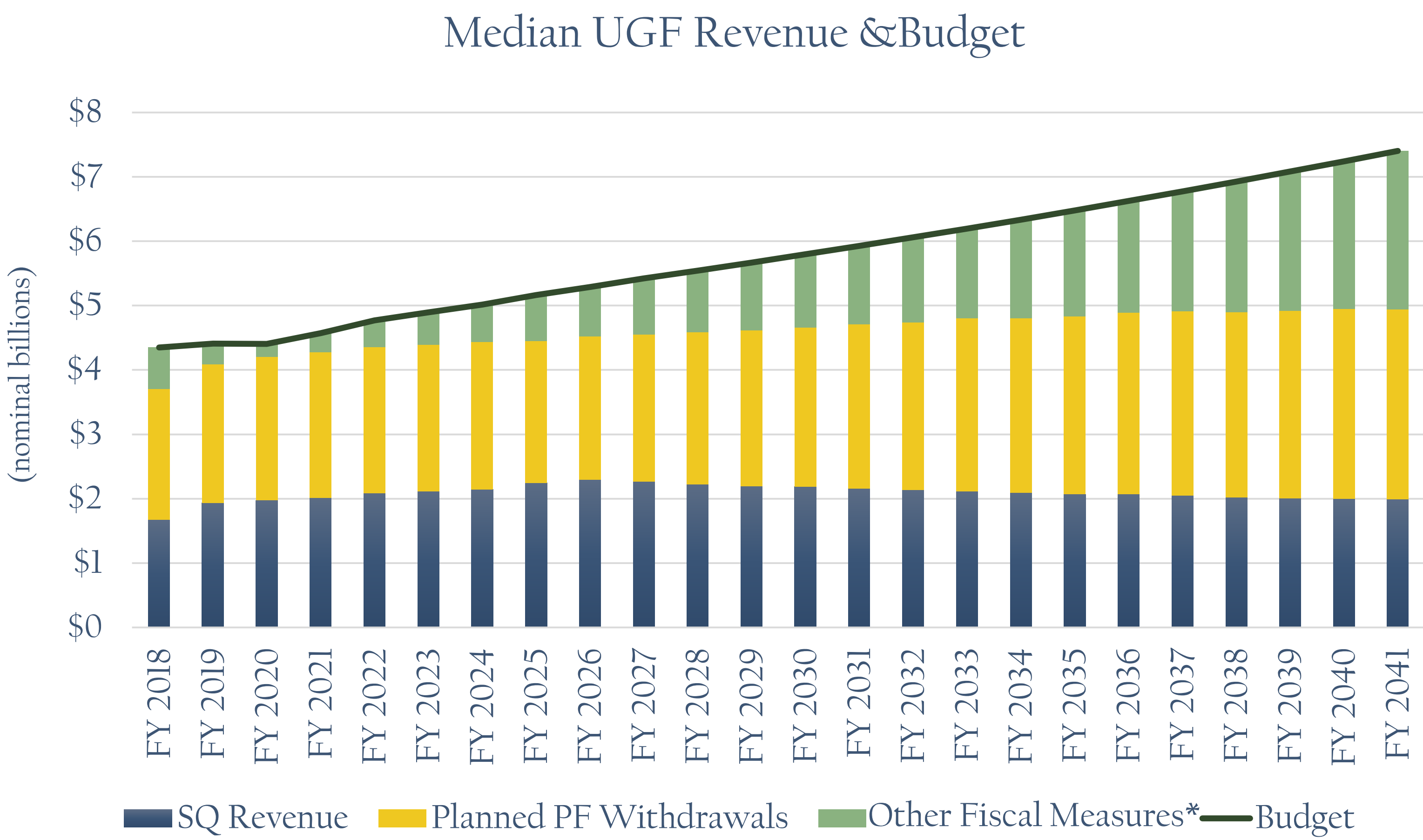
POMV & Draw Limit



A formula that includes a draw limit:

- Gradually reduces the amount drawn from the ERA as oil revenues increase (above $72)
- Stabilizes UGF revenue through a range of oil prices
- Grows the fund more, producing larger draws and dividends in the future

PFPA, Full Fiscal Plan



*Could include any combination of budget cuts, new revenues, or use of non-permanent fund savings

Status Quo
Unrestricted General Fund Revenue

Oil Price (per barrel)	ANS Barrels Per Day			
	500,000	600,000	700,000	800,000
$40	$1.3	$1.4	$1.5	$1.6
$50	$1.6	$1.8	$1.9	$2.1
$60	$1.9	$2.1	$2.4	$2.8
$70	$2.2	$2.7	$3.4	$4.0
$80	$2.9	$3.6	$4.4	$5.2
$90	$3.7	$4.7	$5.7	$6.6
$100	$4.6	$5.8	$6.9	$8.0
$110	$5.5	$6.8	$8.2	$9.5
$120	$6.4	$7.9	$9.4	$10.9

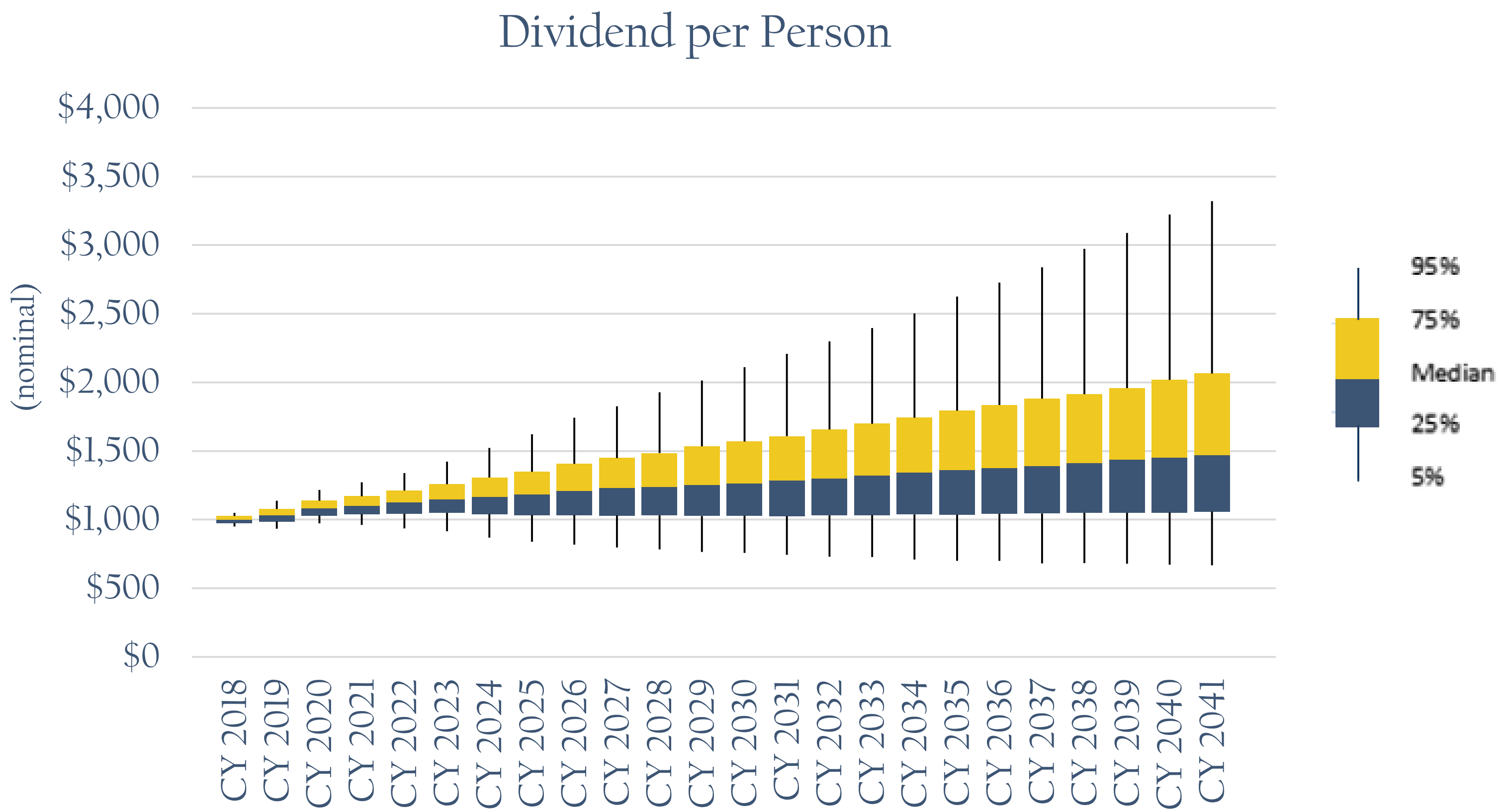
Part V

DIVIDEND DURABILITY

Dividend Formula

- $1,000 per person for the first 2 years, then
- 20% of UGF royalties (15% of all royalties), plus
  20% of the 5.25% POMV draw (about 1% POMV)
  (expected to be about $1,000 per person into the future)

PFPA, Full Fiscal Plan



2018 median value: $1,000

2041 median value: $1,468 nominal ($861 real)

20/20 Dividend (Oct. 2017)

Oil price (FY 2017)	Current Production	+100,000 barrels/day	+200,000 barrels/day	+300,000 barrels/day
$30	$885	$907	$928	$950
$40	$936	$968	$999	$1,031
$50	$987	$1,029	$1,070	$1,111
$60	$1,038	$1,090	$1,141	$1,192
$70	$1,089	$1,151	$1,212	$1,273
$80	$1,141	$1,212	$1,283	$1,354
$90	$1,192	$1,273	$1,354	$1,435
$100	$1,243	$1,334	$1,425	$1,516
$110	$1,294	$1,395	$1,496	$1,597
$120	$1,345	$1,455	$1,566	$1,678
$130	$1,396	$1,516	$1,637	$1,758
$140	$1,446	$1,577	$1,708	$1,839
$150	$1,497	$1,638	$1,779	$1,920

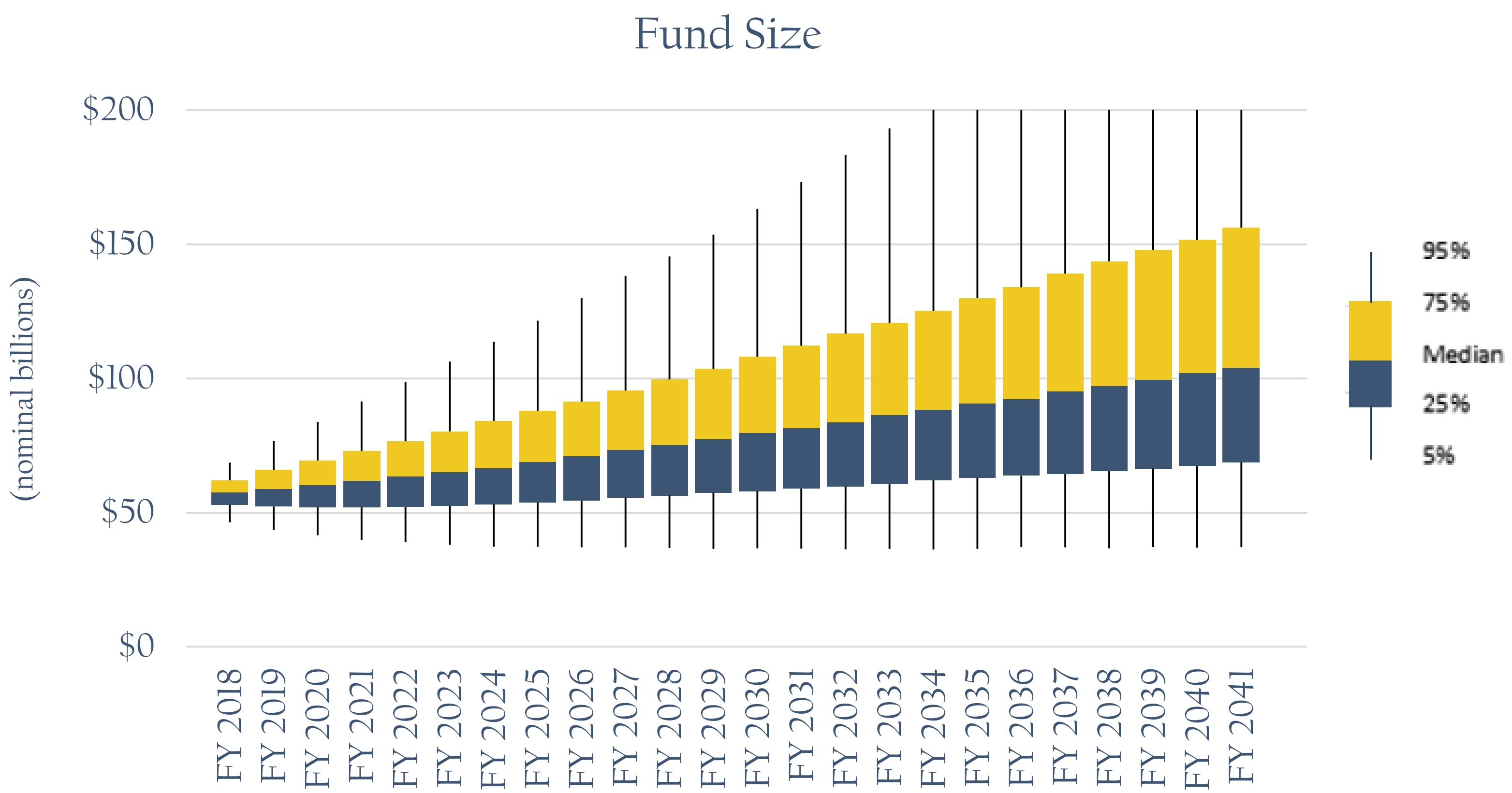
Part VI

Fund Durability & Inflation Proofing

Inflation Proofing Transfers

- AS 37.13.145(c) currently provides for annual inflation proofing transfers from the ERA to corpus.
- The ERA needs a sufficient balance to be able to meet the draw each year ("ERA durability" concern).
- To address this concern, the bill provides that the ERA balance over 4 times the maximum draw (after current year draw) is transferred to corpus instead.
- This "4 times" rule is designed to grow the corpus in pace with inflation over time.

PFPA, Full Fiscal Plan



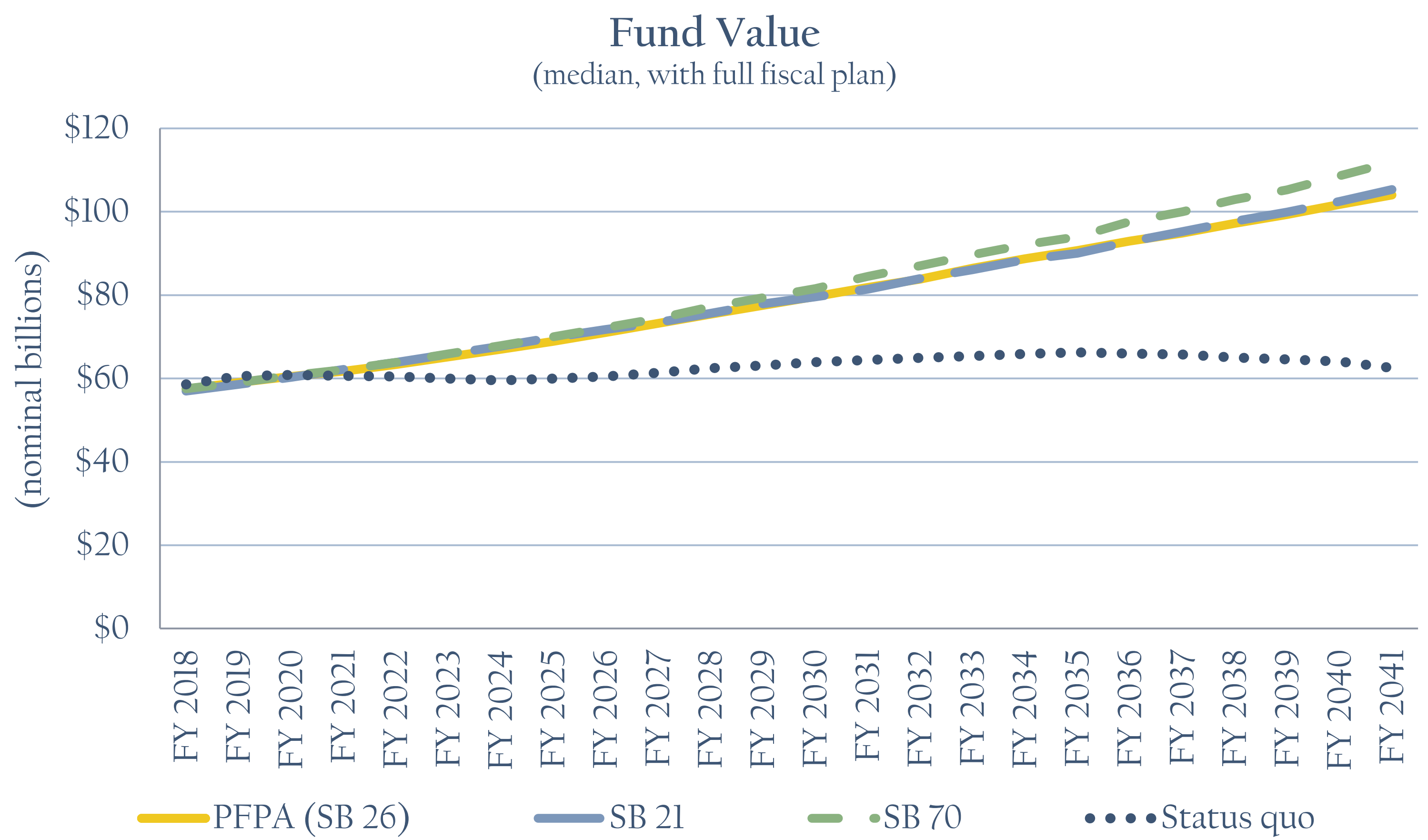
2041 median value: $104,079 nominal ($61,016 real) million

ER Fail Rate over 24 Years: 1.52%

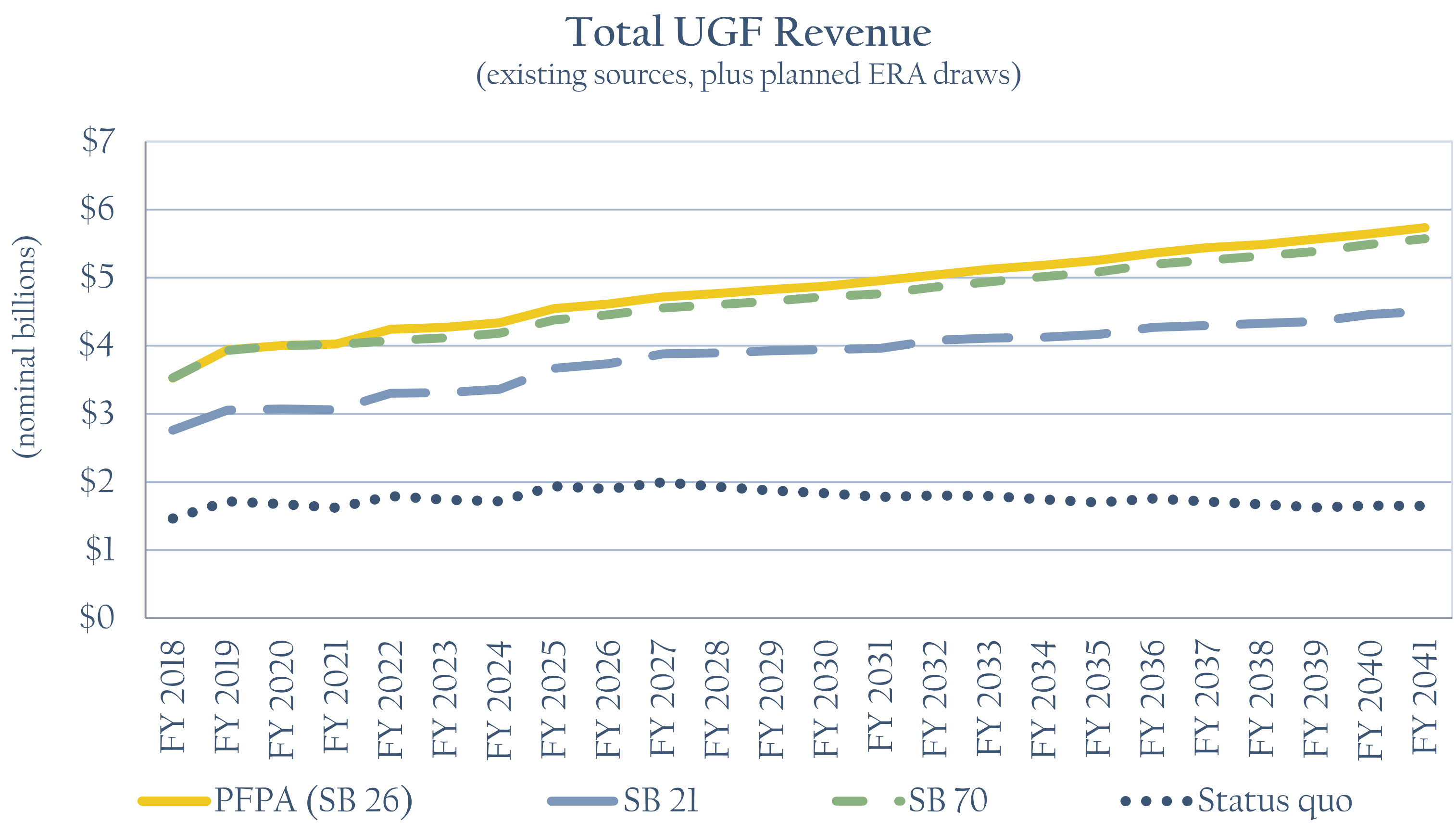
Part VIII

Fiscal Plan Impact

Fund Size Comparison



UGF Revenue Comparison



CONCLUSION

Conclusion

	Status Quo	PF Plan Only (any plan)	Full Fiscal Plan		
			With SB 21	With PFPA	With SB 70
1. Rule-Based	Only until CBR is depleted.	**Partial**, Only until CBR is depleted.	Yes.	Yes.	Yes.
2. Stabilizing					
- Investment Income	**No**, not addressed.	Not after ERA depleted.	**Partial**, 5-year averaging in POMV.	**Partial**, 5-year averaging in POMV	**Partial**, 5-year averaging in POMV.
- Total Revenue	**No**, not addressed.	Not after ERA depleted.	**No defined plan.**	**Partial**, in a mid-range of oil prices.	Yes.
3. Protect the Dividend	**Dividend at risk** when ERA depleted.	**Dividend at risk** when ERA depleted	Yes.	Yes.	Yes.
4. Protect the Fund (total & corpus)	**No.** Value of fund and corpus greatly degraded.	**No.** Value of fund and corpus eventually degraded.	**Partial**, maintains the total fund value, but the growth is not protected in the corpus.	**Yes.** Maintains value of the fund and corpus over the long term.	**Yes.** Maintains value of the fund and corpus over the long term.
5. Maximize ERA Use	**Over use.** High risk of depleting ERA in short-term.	**Partial.** Substantial risk of depleting ERA in long-term.	**Partial.** Withdraws same percent each year regardless of budget need.	**Yes.** Drawing less when oil revenues are high allows larger draws when oil revenues are low.	**Partial.** The fund can likely sustain draws higher than 5% over the long term.

Conclusion

Plan Comparison	Status Quo	SB 21	SB 26 (PFPA)	SB 70
FY18 Dividend (per person)	$2,411	$1,781	$1,000	$1,000
FY18 UGF Budget (net dividend, billions$)	$4.3			
FY18 Existing UGF Revenues (billions$)	$1.6		$1.6	$1.7
Planned ERA Draws (billions$)	N/A	$1.2	$2.0	$1.9
Additional Measures Required for a **Full Fiscal Plan**	**$2.8** billion	**$1.5** billion	**$0.7** billion	**$0.7** billion

PFPA (SB 26)

- Provides a rule-based framework for use of the fund earnings
- Stabilizes UGF revenues
- Protects the dividend
- Protects the permanent fund
- Maximizes the use of the earnings reserve