MINNESOTA DEPARTMENT OF COMMERCE

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May 5, 2017

Daniel P. Wolf
Executive Secretary
Minnesota Public Utilities Commission
121 7th Place East, Suite 350
St. Paul, Minnesota 55101-2147

RE: **Comments of the Minnesota Department of Commerce, Division of Energy Resources**
Docket No. E015/M-16-776

Dear Mr. Wolf:

Attached are the comments of the Minnesota Department of Commerce, Division of Energy Resources (Department) in the following matter:

Minnesota Power's Renewable Resources Rider and 2017 Renewable Factor.

The Petition was filed on November 2, 2016 by:

Susan Ludwig
Policy Manager
Minnesota Power
30 West Superior Street
Duluth, MN 55802

The Department recommends that **Minnesota Power (MP) provide additional information in reply comments.** The Department will offer additional comments and recommendations in subsequent response comments after it reviews MP's reply comments.

Sincerely

/s/ MARK JOHNSON
Financial Analyst

MJ/lt
Attachments

MINNESOTA DEPARTMENT OF COMMERCE

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

COMMENTS OF THE MINNESOTA DEPARTMENT OF COMMERCE DIVISION OF ENERGY RESOURCES

DOCKET NO. E015/M-16-776

I. BACKGROUND

MP's Renewable Resources Rider (RRR) was first established in Docket No. E015/M-07-216 to allow for recovery of costs associated with future renewable resource contracts, investments and expenditures, as allowed under Minn. Stat. §216B.1645, subd. 2. The Commission has since approved five updates to MP's RRR, in Docket Nos. E015/M-10-273, E015/M-11-274, E015/M-13-410, E015/M-14-349, and E015/M-14-962.

On November 2, 2016, MP filed the instant petition seeking approval of its updated RRR and 2017 renewable factors (Petition). In addition, MP requested that the Commission waive the 90 day requirement under Minn. Rule 7825.3200 and grant provisional approval of MP's rate request, effective January 1, 2017. According to MP, this approach would allow cost recovery for the RRR projects to be synchronized between its concurrent rate case (Docket No. E015/GR-16-664) and Petition.

On November 22, 2016, the Minnesota Department of Commerce (Department) recommended approval of MP's proposed provisional implementation, noting that the Department generally does not support such proposals, but identifying both the proposed decrease in rates and the coincidence with MP's general rate case as unusual factors.

On December 21, 2016, the Commission approved MP's request to implement its 2017 renewable factors on a provisional basis, beginning January 1, 2017.

On February 14, 2017, the Commission issued its *Order Denying Minnesota Power's Petition for Reconsideration and Granting Reconsideration for Further Proceedings* in MP's previous RRR filing in Docket No. E015/M-14-962. The Commission thereby denied Minnesota Power's petition for reconsideration regarding the treatment of North Dakota Investment Tax Credits (NDITCs). However, the Commission granted reconsideration on its own motion for purposes of considering the merits of its November 30, 2016 Order. In addition, the Commission delegated to the Executive Secretary the task of issuing a notice requesting additional briefing and comments on the issues raised by the Commission.

The Executive Secretary issued its Notice of Comment Period on March 24, 2017 requesting comments by the close of business on May 30, 2017. As such, the Department notes that this aspect of MP's proposal remains unresolved.

II. SUMMARY OF FILING

A. REVENUE REQUIREMENT AND TRACKER BALANCE

MP requested recovery of its estimated 2017 revenue requirements for its Bison Projects and the Thomson Project, as well as recovery of under-collected amounts in the past, which MP accumulates in a tracker.

MP proposed to allocate a portion of its total company costs to the Minnesota jurisdiction using the allocators from its last rate case, Docket No. E015/GR-09-1151.[1] Table 1 below summarizes the total Minnesota-jurisdictional amount for which the Company requested recovery in its Petition.

Table 1: Summary of Estimated Total 2017 Revenue Requirement ($ Millions)

2017 Revenue Requirement	
Bisons 1-4	51.2
Thomson	9.6
Subtotal	60.8
Tracker Balance	14.7
Total 2017 Revenue Requirement	75.5

Source: Petition; Exhibit B-1

Consistent with past RRR filings, MP proposed to separate its various retail customer classes into two groups, one consisting solely of the Company's Large Power (LP) customer class, and one consisting of all other retail classes. MP proposed to allocate the total 2017 revenue requirement ($75.5 million) between the two groups using its Power Supply Production and Power Supply Transmission demand allocators from its last rate case.[2]

MP proposes to allocate its tracker balances using a backwards-looking historical analysis that compares actual revenue requirements to actual cash collections from each customer group, and adds the differences to each group's respective tracker balance.[3]

[1] See Petition, page 22 and Exhibit B-8
[2] See Petition, page 22 and Exhibit B-8.
[3] See Petition, Exhibit B-1, page 2 of 9.

B. RATE DESIGN

The Company proposed to use the same rate design approved in its last RRR filing in the instant filing. MP proposed to calculate demand and energy adders for its LP customer class, and to calculate a single average energy adder for all other retail classes using projected 2017 billing determinants. MP proposed to split the LP customer class' total revenue requirement between demand and energy components based on the approximate split used in MP's most recent rate case (60 percent demand, 40 percent energy). MP calculated its proposed adders using MP's 2017 estimated billing factors.[4]

Table 2 summarizes MP's current and proposed RRR rates.

Table 2: Summary of Current and Proposed RRR Rates

	RRR Rates		
		2017	
	Current	Proposed	Change
Large Power			
Demand (cents/kW - month)	4.260	4.610	0.350
Energy (cents/kWh)	0.404	0.450	0.046
All Other Retail Classes			
Energy (cents/kWh)	1.172	0.598	(0.574)

Source: Petition, Exhibit B-1

III. MINNESOTA DEPARTMENT OF COMMERCE (DEPARTMENT OR DOC) ANALYSIS

A. STATUTORY REQUIREMENTS

Minn. Stat. § 216B.1645, subd. 2a states that:

> (a) A utility may petition the commission to approve a rate schedule that provides for the automatic adjustment of charges to recover prudently incurred investments, expenses, or costs associated with facilities constructed, owned, or operated by a utility to satisfy the requirements of section 216B.1691, provided those facilities were previously approved by the commission under section 216B.2422 or 216B.243, or were determined by the commission to be reasonable and prudent under section 216B.243,

[4] See Petition, Exhibit B-1, page 1 of 9.

subdivision 9. For facilities not subject to review by the commission under section 216B.2422 or 216B.243, a utility shall petition the commission for eligibility for cost recovery under this section prior to requesting cost recovery for the facility. The commission may approve, or approve as modified, a rate schedule that:

(1) allows a utility to recover directly from customers on a timely basis the costs of qualifying renewable energy projects, including:
  (i) return on investment;
  (ii) depreciation;
  (iii) ongoing operation and maintenance costs;
  (iv) taxes; and
  (v) costs of transmission and other ancillary expenses directly allocable to transmitting electricity generated from a project meeting the specifications of this paragraph;
(2) provides a current return on construction work in progress, provided that recovery of these costs from Minnesota ratepayers is not sought through any other mechanism;
(3) allows recovery of other expenses incurred that are directly related to a renewable energy project, including expenses for energy storage, provided that the utility demonstrates to the commission's satisfaction that the expenses improve project economics, ensure project implementation, advance research and understanding of how storage devices may improve renewable energy projects, or facilitate coordination with the development of transmission necessary to transport energy produced by the project to market;
(4) allocates recoverable costs appropriately between wholesale and retail customers;
(5) terminates recovery when costs have been fully recovered or have otherwise been reflected in a utility's rates.

(b) A petition filed under this subdivision must include:
  (1) a description of the facilities for which costs are to be recovered;
  (2) an implementation schedule for the facilities;
  (3) the utility's costs for the facilities;
  (4) a description of the utility's efforts to ensure that costs of the facilities are reasonable and were prudently incurred; and
  (5) a description of the benefits of the project in promoting the development of renewable energy in a manner consistent with this chapter.

B. PROJECT ELIGIBILITY

In previous proceedings, the Commission found that MP's Bison Projects, the Thomson Project and related transmission components qualified as eligible technologies under Minn. Stat. §216B.1691 and approved the related investments and expenditures.[5] MP divided its Bison and Thomson Projects into sub-parts for purposes of calculating its overall revenue requirement.

The Department compared the list of Bison project sub-parts found on Exhibit B-1, Page 9 of 9 of the Petition, to the list of Bison project sub-parts approved in MP's previous RRR filing in Docket No. E015/M-14-962. All Bison project sub-parts included in MP's Petition were included in its previous RRR filing, with the exception of the sub-part titled "V-Mode Software for Bison 4." The Department recommends that MP explain in reply comments why the Company proposes to add a new cost recovery sub-part for its Bison 4 Wind Project, and why it is reasonable to include these costs for recovery in the current Petition.

With respect to the Thomson Project, the Department compared the list of Thomson project sub-parts in MP's Petition, Exhibit B-5, Page 1 of 50 to the list of Thomson project sub-parts approved in MP's eligibility filing in Docket No. E015/M-14-577.[6] All Thomson project sub-parts included in MP's Petition were included in its eligibility filing. As a result, the Department concludes that all of the Thomson-related sub-parts for which MP is seeking recovery in its Petition are eligible for cost recovery.

C. TOTAL PROJECT COSTS AND COST CAPS

In Xcel's Transmission Cost Recovery Rider (TCR Rider) filing in Docket No. E002/M-09-1048, the Commission set the standard for evaluating rider project costs going forward. The Commission stated in its April 7, 2010 Order that:

> ...the Commission finds that TCR project cost recovery through the rider should be limited to the amount of the initial cost estimates at the time the projects are approved as eligible projects, with the opportunity for the Company to seek recovery of excluded costs on a prospective basis in a subsequent rate case. A request to allow cost recovery for project costs above the amount of the initial estimate may be brought for Commission review only if unforeseen or extraordinary circumstances arise on a project.

Table 3 below summarizes the cost estimates from the initial eligibility filings for each project and compares them to the cost estimates used to calculate revenue requirements in MP's Petition.

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[5] See Docket Nos. E015/M-09-285 (Bison 1), E015/M-11-234 (Bison 2), E015/M-11-626 (Bison 3), E015/M-13-907 (Bison 4), and E015/M-14-577 (Thomson Project).
[6] See DOC's November 7, 2014 Comments in Docket No. E015/M-14-577; Attachment C, Page 7 of 84.

Table 3: Summary of Capital Investment Estimates ($ Millions)

	Cost Eligibility Filings	2017 RRR Filing	Difference
	[1]	[2]	[3]=[2]-[1]
Bison 1	177.6	172.0	-5.6
Bison 2	157.0	145.8	-11.2
Bison 3	157.0	147.6	-9.4
Bison 4	345.3	330.2	-15.1
Thomson	90.2	82.5	-7.7

[1] Cost Eligibility Filings:
Bison 1 - Docket No. E015/M-09-285
Bison 2 - Docket No. E015/M-11-234
Bison 3 - Docket No. E015/M-11-626
Bison 4 - Docket No. E015/M-13-907 and May 22, 2015 Commission Order in E015/M-14-349
Thomson - DOC's Nov. 17, 2014 Comments in Thomson Eligibility Docket, Attachment C, page 81.
[2] MP's Petition, Bisons 1-4, Exhibit B-3
MP's Petition, Thomson, Exhibit B-6

The estimates shown above in Column [1] represent the total capital costs of the projects as found in their eligibility filings. The estimates shown above in Column [2] represent the total capital costs for the projects used to calculate the revenue requirements in the Petition.[7] Since the capital costs included for recovery in the Petition are below the cost estimates from the projects' eligibility filings, the Department concludes that MP's proposed recovery of capital costs appears reasonable.

D. 2017 ANNUAL REVENUE REQUIREMENTS

As noted above, MP divides each of its four Bison Projects and the Thomson Project into sub-parts, and calculates a separate revenue requirement for each sub-part. The revenue requirements of all sub-parts are summed to derive the total 2017 revenue requirement of $60.8 million. The Department discusses several aspects of the Company's annual revenue requirements calculations below.

[7] These costs do not include internal capitalized costs and associated allowance for funds used during construction since these costs are not allowed for rider recovery.

1. *AFUDC, Return on Construction Work in Process (CWIP), and Internal Capitalized Costs*

Generally, MP accrues an allowance for funds used during construction (AFUDC) on investments and expenditures related to each project sub-part until the Commission approves cost recovery in a cost eligibility filing. Once the Commission approves a project for cost recovery, MP ceases to accrue AFUDC and begins to earn a current return on CWIP, as permitted by Minn. Stat. §216B.1645, subd. 2a(a)(2). MP calculates a full return on its CWIP balance at its cost of capital as determined in its most recently approved rate case.

The Commission's December 13, 2013 Order on MP's 2013 RRR Filing required MP to exclude internal capitalized costs from its calculation of AFUDC and return on CWIP, consistent with the terms of its prior rider filings. As shown in Exhibit B-3 of the Petition, the Company appropriately excluded internal capitalized costs and related AFUDC costs from its rate base and revenue requirements calculations.

The Department concludes that MP's treatment of AFUDC and return on CWIP is reasonable.

2. *Deferred Income Taxes and Prorated Accumulated Deferred Income Tax Liabilities (ADITL)*

Accumulated Deferred Income Tax Liabilities (ADITL) result from the difference between straight-line depreciation, which is required under Minnesota Rule 7825.0800 for ratemaking purposes, and accelerated depreciation, which is allowed for tax purposes. Since ratepayers pay income taxes based on straight-line depreciation and the utility pays income taxes based on accelerated depreciation, this tax timing difference is reflected in ADITL balances.[8] Moreover, since ratepayers are essentially prepaying income taxes (via deferred tax expense) before the taxes are due to the Internal Revenue Service (IRS), ratepayers have traditionally received an ADIT credit, which reduces rate base, to compensate ratepayers for the prepayment of income taxes. This overall approach is generally referred to as deferred tax accounting.

Minnesota utilities, including MP, have recently argued in riders and rate cases that the IRS requires the proration of ADITL balances for ratemaking purposes that use forecasted test periods. The proration of ADITL balances generally results in lower ADITL balances for ratemaking purposes, which increases the proposed annual revenue requirements to be recovered from ratepayers in riders and rate cases that use forecasted test periods.

The Department asked MP, in DOC Information Request No. 2, if the Company used prorated ADITL balances in its revenue requirements in the Petition. MP replied that:

[8] The effect of the difference in timing between straight-line depreciation under ratemaking accounting and accelerated depreciation under tax accounting changes each year, so it is necessary to calculate the amounts each year. The difference in depreciation levels for a given year is multiplied at the current tax rate to determine deferred income tax expense on the income statement. A corresponding or offsetting entry is then made to the Accumulated Deferred Income Tax Liabilities (ADITL) balance on the balance sheet.

> MP did not prorate its ADITL balances included in the revenue requirement. The 2017 Renewable Factor filing calculates a rate reduction for most customers. Most of the projects included in the Renewable Resources Rider are being transferred into the Company's rate base in the current rate case. The Company has included the prorata calculation in the current rate case proceeding, Docket No. E015/GR-16-664, filed November 2, 2016 (specifically, Volume IV, Supplemental Direct Schedule A-5, page 2, columns 10 and 12). Therefore we did not include the prorata calculation in this filing.[9]

Based on the above, the Department concludes that the issue of prorating ADITL balances does not need to be addressed in this proceeding. Instead, the Department will address the issue of prorating ADITL balances in MP's 2016 Rate Case (Docket No. E015/GR-16-664).

3. Production Tax Credits and Deferred Tax Assets

On page 20 of its Petition, MP stated that the production tax credits (PTCs) generated by the Bison Projects are credited as an offset to revenue requirements in the year they are generated. However, as a result of the Company's net operating losses (NOLs), MP stated that the cash benefits of the PTCs will not be realized in the year generated, but rather will be deferred for future realization as deferred tax assets (DTAs). The Department discusses this issue further below under *Net Operating Losses and Deferred Tax Assets.*

The Department notes that by reducing annual tax expense in year the PTCs are generated (recognized) and recording a deferred tax asset in rate base, which will be later reduced when the PTCs are realized (utilized), the Company is using a form of deferred tax accounting that is consistent with the Company's past ratemaking practice. The Department agrees with this approach.

The Department notes that in MP's current rate proceeding (E015/GR-16-664), MP stated that the accumulated deferred income tax asset (ADITA) for PTCs has been removed from the RRR (current Petition) and has instead been incorporated into the rate case beginning with interim rates. [10] MP also indicated that, because PTCs are difficult to predict, an annual true-up of the PTC for the difference between projected PTCs in the rate case test year and the actual PTCs generated in future years is appropriate.

The Department notes that in its Response to DOC Information Request No. 1144, Attachment 1144.01, MP's provided the following estimates of its PTCs for 2017 to 2021:

[9] A copy of MP's Response to DOC Information Request No. 2 is included in DOC Attachment 2 to these comments.
[10] Direct Testimony of Ms. Jamie Jago in Docket No. E015/GR-16-664, pages 14-16.

2017	$40.087 million
2018	$44.091 million
2019	$43.286 million
2020	$43.045 million
2021	$39.537 million

The Department agrees with MP's proposal and recommends that the Commission approve MP proposal to true-up to actual PTCs generated in 2017 and beyond in their RRR filings. The Department notes that both OTP and Xcel true-up their PTCs in their renewable riders.

The Department notes for clarity that MP is actually accomplishing its cash collections via the RRR for facilities and related PTCs that were in-service by December 31, 2016 and rolled into the current rate case. MP's cash collections through the RRR means there will need to be a true-up in the rate case to replace the estimated revenue amount for the RRR included in the rate case with the actual amount collected in the rider. The Department will address this issue further in MP's current rate case.

4. Net Operating Losses and Deferred Tax Assets

As noted above, a net operating loss (NOL) occurs when a company has more income tax deductions than it has taxable income in a year for tax purposes. If a company is not able to carryback its NOL for tax purposes, it records a deferred tax asset (debit) on its balance sheet and reduces or credits deferred tax expense on the income statement. Examples of accounting for NOLs and DTAs is included in DOC Attachment 5 to these comments.

In its November 12, 2013 Order in Docket No. E015/M-11-695, the Commission required the Company to use a hybrid approach when accounting for NOLs and related DTAs. The Commission required MP to include in rate base the smaller of the DTAs calculated using the stand-alone and consolidated methods.[11] MP's calculation of its DTAs under both methods is shown in the annual revenue requirement calculations for each project in Exhibit B-2 of the Petition.

The Department reviewed MP's calculations of its DTAs, specifically those related to its Bison 4 wind farm under the stand-alone method. In DOC Information Request No. 3, the Department noted that MP showed a current income tax amount of ($305,095) in the February 2017 annual revenue requirements for its Bison 4 wind project in Exhibit B-2, Page 26 of 36, Line 10. In addition, the Department noted that this amount matched the monthly change in the ADITA-NOL balance for the February 2017 Bison 4 wind project. As a result, the Department asked MP if it was reclassifying its current income taxes of ($395,095) to deferred income taxes since the Company was in a NOL carryforward position. MP replied that:

[11] See the Department's January 25, 2013 Comments in Docket No. E015/M-11-695 for a more detailed explanation of the stand-alone and consolidated methods.

> That is correct. Minnesota Power is reclassifying its current income taxes to deferred income taxes. In this particular section of the calculations, we are showing the ($395,095) as current income taxes for purposes of determining the current year layer of NOL. As stated above, the ($395,095) is added to the ADITA – NOL to arrive at the $92,333,227 total ADITA – NOL.[12]

The Department also noted that MP included total income tax expenses of $1,064,434 in the February 2017 annual revenue requirements for the Bison 4 wind farm. As a result, the Department asked MP, in DOC Information Request No. 4A, to provide the current and deferred income tax expense amounts included in the $1,064,434. MP replied that:

> The $1,064,434 is entirely deferred income tax, due to the fact that the Bison 4 Wind project is in NOL carryforward position.[13]

In addition, the Department asked MP in DOC Information Request No. 4B:

> For the amount that is deemed deferred income taxes in response to part A), please reconcile this amount with the changes in accumulated deferred income tax liabilities and accumulated deferred income tax assets for the month of February 2017 as shown on the above referenced attachment.

MP replied that:

> The $1,064,434 is the tax component of the Total Return on Average Rate Base. In Exhibit B-2, Page 26 of 36, the Total Return on Average Rate Base, including the income tax component, is $3,253,012. This is equal to the Average Rate Base, $321,285,173, times 12.15% total rate of return (divided by 12 for 1 month).
>
> The calculation continues with Total Return on Average Rate Base being included in the Revenue Requirements of $2,105,040. The Revenue Requirements are combined with tax deductions to arrive Taxable Income (loss). Finally, the Taxable Income is multiplied by the tax rate of 41.37%, and the result is the required increase or decrease to the ADITA – NOL. In this case the ADITA – NOL is increasing by ($395,095).

[12] A copy of MP's Response to DOC Information Request No. 3 is included in DOC Attachment 3 to these comments.
[13] A copy of MP's Response to DOC Information Request No. 4 is included in DOC Attachment 4 to these comments.

> The change in ADITL – Def Taxes of ($424,690) is equal to the difference between the change in accumulated book depreciation, $734,440, and the change in accumulated tax depreciation, $1,761,006, multiplied by the tax rate of 41.37%.
>
> The $1,064,434 tax component of the Total Return on Average Rate Base impacts the ADITA – NOL line item as described above, but has no impact on the ADITL – Def Taxes line item.[14]

The Department notes that MP did not reconcile the $1,064,434 in deferred income taxes with the changes in the changes in the ADITL and ADITA as requested. Instead, the Company explained its various calculations shown on Exhibit B-2, Page 26 of 36 of the Petition.

Based upon further review, the Department notes that the $1,064,434 figure does not represent the entire amount of deferred tax expense because it does not include the grossed-up PTC credit that was used to reduce the annual revenue requirements by $2,501,420.[15] After accounting for the grossed-up PTC credit, the Department concludes that the total amount of deferred tax expense included in the February 2017 annual revenue requirement for the Bison 4 wind project totals ($1,436,986), rather than MP's proposed $1,064,434 figure.[16] This amount correctly matches the monthly changes in deferred tax assets and liabilities as follows:

Table 4: Summary of Deferred Tax Expense and Rate Base Impacts for February 2017 Bison 4 Wind Project

	Rate Base Impact	Deferred Tax Expense
Increase in ADITA-NOL	395,094	($395,094)
Increase in ADITL	($424,690)	$424,690
Increase ADITA-PTC	$1,466,582	(1,466,582)
Total	$1,436,986	($1,436,986)

While MP's response to the Department's information request was not accurate, the Department was able to confirm that MP appropriately reflected its deferred income tax expense and related deferred income tax assets and liabilities in its revenue requirement calculations. In addition, the Department concludes that MP's revenue requirement calculations apply the hybrid method as required. As a result, the Department concludes that MP's treatment of NOLs is reasonable.

In MP's 2016 Rate Case (Docket No. E015/GR-16-664), the Company stated that determining the ADITA for NOLs, and corresponding revenue requirements under the hybrid

[14] *Id*.
[15] See Petition, Exhibit B-2, Page 26 of 36, Section C-2, Line 16.
[16] $1,064,434 - $2,501,420 = ($1,436,986).

approach in its RRR filings, was very complex and time consuming.[17] In addition, the Company stated that:

> In this rate case, Minnesota Power has incorporated the ADITA for the NOL in the ADIT balance for computing rate base. Consistent with this approach, Minnesota Power proposes to remove the ADITA for the NOL from rider revenue requirements calculations beginning with the implementation of interim rates, and will not include it in subsequent Current Cost Recovery Rider filings. The inclusion of the ADITA for the NOL in the ADIT balance reflects the fact that Minnesota Power was not able to fully utilize all of its tax deductions in prior years.[18]

Given the above, the Department recommends that MP explain why it continues to show a DTA-NOL of $156,374,557 for its RRR as of December 31, 2017 in its Response to DOC Information Request No. 1141, Attachment 1141.04 in its 2016 Rate Case.[19] In addition, the Department recommends that MP confirm, in reply comments, that it will not be seeking any ADITA for NOLs in future cost recovery riders, including the RRR.

5. North Dakota Investment Tax Credits

Beginning on page 20 of its Petition, MP stated that the Bison Projects qualify for North Dakota Investment Tax Credits (NDITCs), but the Company is currently unable to utilize these credits due to a lack of taxable income. MP stated that to the extent it generates taxable income in North Dakota in the future, any resulting income taxes will be offset by the use of these credits. MP stated that it will offset future RRR revenue requirements with NDITCs once the credits have been realized. In addition, MP stated that based on its current estimates of North Dakota income taxes, it does not expect that it will be able to fully utilize these credits at this time.

The Department notes that when MP states that it is unable to utilize these credits due to the lack of taxable income, it is only referring to MP's taxable income based on hypothetical separate income tax returns for North Dakota. MP does not actually file its own separate income tax returns for North Dakota. Instead, MP's income taxes are included in the rolled-up North Dakota income tax returns for ALLETE, and the NDITCs can be applied to taxable income generated by ALLETE's nonregulated operations. In the past, MP has estimated that ALLETE, including MP and all of its nonregulated affiliates, will be able to use approximately twice the amount of NDITCs that MP would be able to use if it were to file separate tax returns.

The Department notes that this issue was discussed extensive in MP's previous RRR filing in Docket No. E015/M-14-962. The Commission ordered the following in its November 30,

[17] Direct Testimony of Ms. Jamie Jago in Docket No. E015/GR-16-664, Pages 5-6
[18] *Id.*
[19] A copy of MP's Response to DOC Information Request No. 1141, Attachment 1141.04 is included as DOC Attachment 5 to these comments.

2016 *Order Determining Treatment of North Dakota Investment Tax Credits for Bison Wind Farm Projects*:

1. All Bison Wind Project North Dakota Investment Tax Credits actually realized in tax-return filings, or monetized through other permissible means, shall be reflected in the Company's revenue requirements.

2. Minnesota Power shall amortize the actual North Dakota Investment Tax Credit realized over the remaining life of Bison Wind Projects. At the onset of the actual realization of the benefit, Minnesota Power shall commence amortization and tax credit inclusion in revenue requirements in its next renewable resource rider filing. Credits realized from year-to-year shall be added to the amortizable balance. The Commission will permit the appropriate adjustment to rate base to account for the unamortized balance of the actual North Dakota Investment Tax Credit realized.

3. Minnesota Power shall file supplemental compliance filings if there are: 1) material changes (greater than ten percent or $2.2 million) to the estimated North Dakota Investment Tax Credit utilization on a consolidated/unitary tax return; and/or 2) legislative changes that allow additional means to monetize these credits.

4. This order shall become effective immediately.

MP filed for reconsideration on December 20, 2016, which the Commission considered on February 2, 2017.

The Commission denied MP's petition for reconsideration and ordered the following in its February 14, 2017 *Order Denying Minnesota Power's Petition for Reconsideration and Granting Reconsideration for Further Proceedings*:

1. The Commission denies Minnesota Power's petition for reconsideration.

2. The Commission grants reconsideration on its own motion for purposes of considering the merits of its November 30, 2016 order for purposes of determining whether any changes should be made to the order.

3. The Commission delegates to the Executive Secretary the task of issuing a notice requesting additional briefing and comment on the issues raised by the Commission at the Commission meeting, and on such additional issues as may be identified by Commission staff, and setting appropriate timelines.

4. This order shall become effective immediately.

In accordance with the Commission's February 17, 2017 Order On March 24, 2017, the Executive Secretary issued its *Notice of Comment Period* requesting initial comments by May 30, 2017 and reply comments by June 30, 2017. Comments listed as open for question in that notice are as follows:

- Does the Commission's November 30, 2016 *Order Determining Treatment of North Dakota Investment Tax Credits (ND ITCs) for Bison Wind Projects* (the "November 30 Order") which assigns Bison ND ITCs actually realized by Allete to its regulated operations result in the sharing of risks and benefits between Allete's regulated and non-regulated operations? Please explain in detail the mechanics of any such sharing.
- If the November 30 Order's assignment of Bison ND ITCs results in a sharing of risks and benefits, please explain how such sharing is or is not justified in light of the Commission's cost-and-benefit-allocation principles as set forth at pages 22-24 of the Commission's September 1, 2006 Order in *In the Matter of the Application of N. States Power Co. d/b/a Xcel Energy for Auth. To Increase Rates for Elec. Serv. In Minn.*, Docket No. E-002/GR-05-1428.
- Does the November 30 Order's assignment of ND ITCs result in a symmetrical sharing of benefits and risks between Minnesota Power ratepayers and ALLETE shareholders? Please provide a clear description and explanation of "symmetrical sharing," "benefits," and "risks" in your response. Please explain whether or not it matters that the benefits and risks are shared symmetrically.
- Is the November 30 Order's assignment of all Bison ND ITCs actually realized to Allete's regulated operations prohibited by contract or state tax law?
- Is the result of the Commission's November 30 Order confiscatory or in any other way in violation of state or federal law?

Based on the above, the Department concludes that, while the Commission denied MP's request for reconsideration, it appears that the issue remains unresolved. Once the Commission makes its final determination on this issue in Docket No. E015/M-14-962, the Department recommends that MP incorporate the effects of the Commission's decision regarding the treatment of NDITCs in the instant Petition.

6. Federal Investment Tax Credits and Thomson Hydro Projects

The Department notes that MP did not discuss federal Investment Tax Credits (ITCs) in its Petition. However, the Department understands that the Thomson Hydro projects qualified for federal ITCs in 2015. MP stated the following, in part, in its Response to DOC Information Request No. 1150 (parts d, e and f) in its 2016 Rate Case:

> The Thomson Hydro Dam was destroyed by the flood in 2012 and the majority of the reconstruction was completed by 2015. Therefore, the 2015 federal tax return was the first place that ALLETE claimed any ITC for this renewable resource reconstruction. However, due to the net operating loss ("NOL") on the 2015 federal tax return, the ITC claimed on the return became a carryforward to be used in future years to reduce future federal income taxes payable. Once this federal ITC carryforward is used on a future federal income tax return, the amortizations of that ITC is considered Minnesota Power investment tax credit feedback, similar to shown on the previously referenced Direct Schedule A-6.
>
> Minnesota Power has been in a federal NOL or using a federal NOL carryforward in each year since 2010 and therefore has not been able to utilize any federal tax credits (PTCs or ITCs) in years 2010 through the present, and projected until 2020, to reduce federal income tax liability. Although no new ITCs have been utilized, ITCs earned prior to 2010 continue to be amortized and that amortization is reflected in this rate proceeding.
>
> Minnesota Power earned a federal ITC for Thomson Hydro Dam in 2015 and claimed the ITC on the federal income tax return. However, due to NOL carryforwards, Minnesota Power was not able to utilize the ITC on its return, and the ITC became an ITC carryforward. To reflect the fact that the ITC has not been utilized, but has become a carryforward, the ITC is recorded as a carryforward tax asset, in this case a deferred tax asset. Minnesota Power is following the normalization requirements as we understand them, both by beginning the amortization period once the credit is used to reduce federal tax liability, and by amortizing the credit over the remaining book life of the underlying asset.[20]

The Department notes that MP did not include any federal ITCs or the related deferred tax asset in its annual revenue requirements for the Thomson Hydro project in the Petition. The Department agrees with this approach since MP has not been able to utilize the ITCs at this time.

The Department notes that federal ITCs total 30 percent of a project's capital costs. Since the capital costs associated with the Thomson Hydro project in this Petition total approximately $82 million, the Department notes that the related ITCs could total approximately $25 million or more. The Department recommends that MP provide, in reply comments, the total value of federal ITCs claimed on its 2015 federal tax return for the

[20] A copy of MP's Response to DOC Information Request No. 1150 is included as DOC Attachment 6 to these comments

Thomson Hydro project. In addition, the Department recommends that future federal ITCs be passed back to ratepayers once MP is able to utilize them on future tax returns.

E. TRUE-UP AND TRACKER BALANCES

As shown above in Table 1, MP proposed to increase its 2017 annual revenue requirements by approximately $14.7 million to reflect prior under-recoveries. MP's tracker balance calculations are shown in Exhibit B-1 of the Petition. The Department reviewed MP's tracker calculations and concludes that they appear reasonable and consistent with prior RRR filings.

In MP's 2016 Rate Case (Docket No. E015/GR-16-664), the Company proposed to transfer cost recovery of all of its Bison wind projects and most of its Thomson hydro projects out of the RRR and into base rates. [21] MP stated that costs of only two sub-projects related to the Thomson project would continue to be recovered in the RRR. These two projects include a spillway capacity project and a dam refurbishing project that are still under construction.[22] With regards to true-ups and future rider filings, MP stated that:

> Before the implementation of final rates, Minnesota Power plans to submit new cost recovery factor filings to establish new billing factors that can be implemented coincident with the implementation of final rates. The new billing factors will include updated estimates of continuing rider revenue requirements and tracker balances. These amounts will be calculated to include a true-up for the continuing rider revenue requirements and tracker balance going back to the beginning of interim rates for the newly-authorized rate of return. If for some reason the new billing factors cannot be implemented coincident with final rates, Minnesota Power proposes to zero out the base rate sub-factors and continue using the rider sub-factors until the new rider billing factors can be implemented.[23] (Emphasis added).

In our February 13, 2017 Letter in E015/M-15-876, the Department stated in Footnote No. 2 that MP's Supplemental Direct Testimony in the 2016 Rate Case indicated that the capital costs of projects from various riders rolled into the rate case should be trued-up, but not the related revenues. The Department stated that it respectfully disagreed with MP and that it would address this issue in testimony in Minnesota Power's 2016 Rate Case.

[21] Mr. Herbert Minke's Direct Testimony in Docket No. E015/GR-16-664, pages 7-8.
[22] Mr. Herbert Minke's Direct Testimony in Docket No. E015/GR-16-664, pages 7-8.
[23] Mr. Herbert Minke's Direct Testimony in Docket No. E015/GR-16-664, pages 4-5.

F. RATE OF RETURN ON INVESTMENT

Minn. Stat. 216B.1645, subd. 2a allows for a return on investment. MP proposed to use the pre-tax rate of return of 12.15 that was approved by the Commission in its last retail rate case (Docket No. E015/GR-09-1151), based on an authorized return on equity of 10.38 percent, grossed up for taxes, as shown in Exhibit B-7 of the Petition. This approach is consistent with MP's previous RRR filings.

The DOC agrees with use of this approach but recommends that MP be required to use the actual rate of return approved by the Commission in its 2016 Rate Case to recalculate its 2017 annual revenue requirements, true-up, and remaining tracker balance to be charged or returned to ratepayers coincident with the implementation of final rates.

G. JURISDICTIONAL ALLOCATORS

Minn. Stat. §216B.1645, subd 2a requires utilities to allocate project costs appropriately between wholesale and retail customers. As shown in Exhibit B-8 of its Petition, MP used the jurisdictional demand allocators approved by the Commission in its last retail rate case (Docket No. E015/GR-09-1151). The Department understands that MP's jurisdictional demand allocators account for the split between wholesale and retail operations and notes that this approach is the same method used in MP's previous RRR filings.

The DOC agrees with this approach but recommends that MP be required to use the actual jurisdictional allocators approved by the Commission in its 2016 Rate Case to recalculate its 2017 annual revenue requirements, true-up, and remaining tracker balance to be charged or returned to ratepayers coincident with the implementation of final rates.

H. RATE DESIGN AND COST ALLOCATIONS

1. Cost Allocations Between Large Power and All Other Retail Classes

As shown on Exhibit B-1 of the Petition, MP used its Power Supply Production and Power Supply Transmission demand allocators from its last retail rate case to allocate costs between the Large Power (LP) class and all other retail classes. MP's Power Supply Production and Power Supply Transmission demand allocators are shown on Exhibit B-7 of the Petition. This is the same method used to allocate costs between the LP class and all other retail classes in previous RRR filings.

The DOC agrees with this approach but recommends that MP be required to use the actual Power Supply Production and Power Supply Transmission demand allocators approved by the Commission in its 2016 Rate Case to allocate costs between the LP class and all other retail classes, and to recalculate its 2017 annual revenue requirements, true-up, and remaining tracker balance to be charged or returned to ratepayers coincident with the implementation of final rates.

2. Cost Allocations Within The Large Power Class

Within the LP class, MP proposes to incorporate both demand and energy rate adders by splitting the Large Power customers' retail revenue requirement between demand and energy components based on the demand and energy revenue split (approximately 60% demand/40% energy) in MP's most recent rate case in Docket No. E015/GR-09-1151. The demand and energy adders are then calculated using MP's 2017 estimated billing factors. This is the same method used to allocate costs within the LP class in MP's previous RRR filings.

The DOC agrees with this approach but recommends that MP be required to use the actual demand and energy revenue split approved by the Commission in its 2016 Rate Case and to recalculate its 2017 annual revenue requirements, true-up, and remaining tracker balance to be charged or returned to ratepayers coincident with the implementation of final rates.

3. Cost Allocations Within All Other Retail Classes

For the remaining non-Large Power customer classes, MP proposes separate energy-only rate adders using projected 2017 billing determinants. This is the same method used in previous RRR filings. The Department agrees with this approach.

I. TARIFF SHEETS

The Department reviewed the Company's proposed tariff sheets for the RRR contained in Exhibit A-1 of MP's Petition. The only substantive change from MP's existing tariff sheets is the new proposed rates. The Department concludes that the proposed changes are generally reasonable, but may need to be updated to reflect the Commission's final order in this proceeding and in the concurrent 2016 rate case.

J. ENERGY PRODUCTION AT THE BISON PROJECTS

In its Comments in the 2015 RRR Docket, the Department noted that the annualized total actual 2014 energy production amount for Bison 1, 2, and 3 was approximately 9.5 percent lower than the expected level of production used to demonstrate that these projects were cost-effective in their respective eligibility filings.[24] This low level of production raises concerns due in part to the immediate financial impact it has on MP's ratepayers described above (*i.e.,* fewer production tax credits, which results in a larger tracker balance), and also in part to the longer-term financial implications if the production estimates used in projects' eligibility filings were inaccurate. A sustained level of energy production that is lower than initially expected will result in a higher levelized cost of the energy produced by the projects.

The Department did not recommend that the Commission take any action at that time, but committed to continue to monitor energy production from the Company's Bison Projects in future RRR filings as well as other relevant Dockets.

[24] See the Department's March 11, 2015 Comments in the 2015 RRR filing (Docket No. E015/M-14-962), page 12.

In response to Department Information Request No. 1 in the instant Docket, MP provided actual production amounts at Bison 1, 2, 3 and 4 for calendar years 2014, 2015, and 2016. As shown below in Table 5, the Department compared actual productions amounts to estimated production amounts used in the projects' cost eligibility filings.

Table 5: Summary of Estimated and Actual Production at Bison 1, 2, 3 and 4

Project	Estimated Production Per Cost Eligibility Filing (MWh)	2014 Actual (MWh)	2015 Actual (MWh)	2016 Actual (MWh)	2016 Difference (MWh)	2016 Difference (%)
	[1]	[2]	[3]	[4]	[5]	[6]
Bison 1	300,000	266,640	239,519	263,376	(36,624)	-12.2%
Bison 2	380,000	324,087	294,291	328,831	(51,169)	-13.5%
Bison 3	365,000	326,727	293,757	326,999	(38,001)	-10.4%
Bison 4	835,000	44,820	712,033	832,159	(2,841)	-0.3%
Total	1,880,000	962,274	1,539,600	1,751,365	(128,635)	-6.8%

[1] Cost Eligibility Filings:

Bison 1 - Docket No. E015/M-09-285

Bison 2 - Docket No. E015/M-11-234

Bison 3 - Docket No. E015/M-11-626

Bison 4 - Docket No. E015/M-13-907

[2] MP's response to Information Request No. 1 (See Department Attachment 1)

[3] MP's response to Information Request No. 1 (See Department Attachment 1)

[4] MP's response to Information Request No. 1 (See Department Attachment 1)

[5] = [4] - [1]

[6] = [5] / [1]

As shown in Table 5 above, MP's actual total 2016 production is approximately 7 percent below the initial production estimates from the projects' cost eligibility filings. While still low at a total 6.8 percent reduction from expected production for all four Bison projects, 2016 energy production was much closer to initial estimates than previous years. The Department will continue to monitor this issue in future RRR dockets. However, the

Department recommends that MP explain in its reply comments the causes of the underperformances of the Bison facilities.

IV. SUMMARY AND RECOMMENDATIONS

The Department recommends that:

- MP explain in reply comments why it is adding a new cost recovery sub-part for its Bison 4 Wind Project, and why it is reasonable to include these costs for recovery in the current Petition;
- the Commission approve MP's proposal to true-up to actual PTCs generated in 2017 and beyond in their RRR filings;
- MP confirm in reply comments that it will not be seeking any ADITA for NOLs in future cost recovery riders, including the RRR;
- MP be required to use the actual rate of return, jurisdictional allocators, and rate design allocations approved by the Commission in its 2016 Rate Case to recalculate its 2017 annual revenue requirements, true-up, and remaining tracker balance to be charged or returned to ratepayers coincident with the implementation of final rates in its next RRR filing; and
- MP explain in reply comments the reasons for continuing under-performance in production of the Bison facilities.

The Department will offer additional comments and recommendation in subsequent response comments after it has reviewed MP's reply comments.

/lt

Minnesota Department of Commerce
Division of Energy Resources
Information Request

Docket Number:	Docket No. E015/M-16-776	☐Nonpublic	☐Public
Requested From:	Minnesota Power, Susan Ludwig	Date of Request:	4/7/2017
Type of Inquiry:	Financial	Response Due:	4/17/2017

Requested by:	Mark Johnson
Email Address(es):	mark.a.johnson@state.mn.us
Phone Number(s):	651-539-1824

Request Number: **1**
Topic: Bison Wind Farm Production

Request:

Please provide all the actual mega-watt-hours produced by each Bison wind farm (Bison 1, Bison 2, Bison 3, Bison 4) for calendar years 2014, 2015, and 2016.

Response:
The following table provides the actual mega-watt-hours produced by each Bison wind farm:

	2014	2015	2016
Bison 1	266,640	239,519	263,376
Bison 2	324,087	294,291	328,831
Bison 3	326,727	293,757	326,999
Bison 4	44,820	712,033	832,159
Total	962,274	1,539,600	1,751,366

To be completed by responder

Response Date:	April 10, 2017
Response by:	Barry Gartner
Email Address:	bgartner@mnpower.com
Phone Number:	218-355-3333

Minnesota Department of Commerce
Division of Energy Resources
Information Request

Docket Number:	Docket No. E015/M-16-776	☐Nonpublic ☒Public
Requested From:	Minnesota Power, Susan Ludwig	Date of Request: 4/13/2017
Type of Inquiry:	Financial	Response Due: 4/24/2017

Requested by:	Mark Johnson
Email Address(es):	mark.a.johnson@state.mn.us
Phone Number(s):	651-539-1824

Request Number: **2**
Topic: Accumulated Deferred Income Tax Liabilities (ADITL)
Reference(s): Exhibit B-2, Page 26 of 36, Section C-2, Line 2

Request:

Please explain if MP prorated its ADITL balances included in the revenue requirement calculations on the above referenced exhibit. If so, please provide the calculations used to determine the prorated ADITL balances.

Response:

MP did not prorate its ADITL balances included in the revenue requirement. The 2017 Renewable Factor filing calculates a rate reduction for most customers. Most of the projects included in the Renewable Resources Rider are being transferred into the Company's rate base in the current rate case. The Company has included the prorata calculation in the current rate case proceeding, Docket No. E015/GR-16-664, filed November 2, 2016 (specifically, Volume IV, Supplemental Direct Schedule A-5, page 2, columns 10 and 12). Therefore we did not include the prorata calculation in this filing.

To be completed by responder

Response Date:	April 17, 2017
Response by:	Tony Niksich
Email Address:	aniksich@allete.com
Phone Number:	(218) 355-3146

Minnesota Department of Commerce
Division of Energy Resources
Information Request

Docket Number:	Docket No. E015/M-16-776	☐Nonpublic	☒Public
Requested From:	Minnesota Power, Susan Ludwig	Date of Request:	4/13/2017
Type of Inquiry:	Financial	Response Due:	4/24/2017

Requested by:	Mark Johnson
Email Address(es):	mark.a.johnson@state.mn.us
Phone Number(s):	651-539-1824

Request Number: 3
Topic: Current Income Taxes
Reference(s): Exhibit B-2, Page 26 of 36, Section D, Line 8 and Exhibit B-2, Page 26 of 36, Section C-2, Line 3

Request:

The above referenced exhibit shows a current income tax amount of ($395,095) for the February 2017 Bison 4 Wind project. This amount matches the monthly change in the ADITA-NOL for the February 2017 Bison 4 Wind project ($92,333,227 - $91,938,132 = $395,095). Please explain if MP is reclassifying its current income taxes of ($395,095) to deferred income taxes since the Company is in NOL carryforward position.

Response:

That is correct. Minnesota Power is reclassifying its current income taxes to deferred income taxes. In this particular section of the calculations, we are showing the ($395,095) as current income taxes for purposes of determining the current year layer of NOL. As stated above, the ($395,095) is added to the ADITA – NOL to arrive at the $92,333,227 total ADITA – NOL.

To be completed by responder

Response Date:	April 17, 2017
Response by:	Tony Niksich
Email Address:	aniksich@allete.com
Phone Number:	(218) 355-3146

Minnesota Department of Commerce
Division of Energy Resources
Information Request

Docket Number:	Docket No. E015/M-16-776	☐Nonpublic	☒Public
Requested From:	Minnesota Power, Susan Ludwig	Date of Request:	4/13/2017
Type of Inquiry:	Financial	Response Due:	4/24/2017

Requested by:	Mark Johnson
Email Address(es):	mark.a.johnson@state.mn.us
Phone Number(s):	651-539-1824

Request Number: **4**
Topic: Deferred Income Taxes
Reference(s): Exhibit B-2, Page 26 of 36, Section C-2, Line 10

Request:

The above referenced exhibit shows an income tax component of $1,064,434 included in the February 2017 Bison 4 Wind project stand-alone revenue requirement calculations.

A) Please provide the current income tax amount and deferred income tax amount included in $1,064,434.

B) For the amount that is deemed deferred income taxes in response to part A), please reconcile this amount with the changes in accumulated deferred income tax liabilities and accumulated deferred income tax assets for the month of February 2017 as shown on the above referenced attachment.

Response:

A) The $1,064,434 is entirely deferred income tax, due to the fact that the Bison 4 Wind project is in NOL carryforward position.

B) The $1,064,434 is the tax component of the Total Return on Average Rate Base. In Exhibit B-2, Page 26 of 36, the Total Return on Average Rate Base, including the income tax component, is $3,253,012. This is equal to the Average Rate Base, $321,285,173, times 12.15% total rate of return (divided by 12 for 1 month).

The calculation continues with Total Return on Average Rate Base being included in the Revenue Requirements of $2,105,040. The Revenue Requirements are combined with tax deductions to arrive Taxable Income (loss). Finally, the Taxable Income is multiplied

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To be completed by responder

Response Date: April 17, 2017
Response by: Tony Niksich
Email Address: aniksich@allete.com
Phone Number: (218) 355-3146

Minnesota Department of Commerce
Division of Energy Resources
Information Request

Docket Number:	Docket No. E015/M-16-776	☐Nonpublic	☒Public
Requested From:	Minnesota Power, Susan Ludwig	Date of Request:	4/13/2017
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Requested by:	Mark Johnson
Email Address(es):	mark.a.johnson@state.mn.us
Phone Number(s):	651-539-1824

by the tax rate of 41.37%, and the result is the required increase or decrease to the ADITA – NOL. In this case the ADITA – NOL is increasing by ($395,095).

The change in ADITL – Def Taxes of ($424,690) is equal to the difference between the change in accumulated book depreciation, $734,440, and the change in accumulated tax depreciation, $1,761,006, multiplied by the tax rate of 41.37%.

The $1,064,434 tax component of the Total Return on Average Rate Base impacts the ADITA – NOL line item as described above, but has no impact on the ADITL – Def Taxes line item.

To be completed by responder

Response Date:	April 17, 2017
Response by:	Tony Niksich
Email Address:	aniksich@allete.com
Phone Number:	(218) 355-3146

Professor Paul Zarowin - NYU Stern School of Business

Financial Reporting and Analysis - B10.2302/C10.0021 - Class Notes

Income Taxes

- book (financial statement) vs. taxable income
- permanent vs. temporary (timing) differences
- permanent differences: effective vs. statutory tax rates
- temporary differences: deferred taxes (expense, asset, liability)
- tax expense: current vs. deferred components
- examples of deferred tax asset, liability
- journal entries
- balance sheet (asset and liability) method
- net operating loss (NOL): carryback vs. carryforward
- deferred tax asset valuation allowance
- footnote disclosure

Income Taxes

The key feature that drives accounting for income taxes is that pre-tax taxable income (what the firm reports to the IRS) generally does not equal pre-tax book (financial statement) income, due to 2 types of differences, *temporary differences* and *permanent differences*.
Thus: book income = taxable income ∀ temporary differences ∀ permanent differences.
As we know, book income is measured according to the accrual principal, wherein revenue and expense recognition need not follow the flow of cash. The IRS calculates taxable income on a cash basis (virtually).

Temporary (timing) differences between book vs. taxable income are due to items of revenue or expense that are recognized in one period for taxes, but in a different period for books. Book recognition can come either before or after tax recognition. These revenue and expense items cause a timing difference between the two incomes, but over the Along run@, they cause no difference between the two incomes. This is why they are temporary. When the difference first arises it is called an *originating* timing difference; when it later reverses it is called a *reversing* timing difference. Examples of temporary differences are: (1) computing depreciation expense by the SL method for books and by an accelerated method for taxes, and (2) computing bad debts expense by the allowance method for books and by the direct write-off method for taxes. Over the life of the firm, total depreciation expense and bad debts expense are unaffected by the method. What is affected is how much expense is recognized in any given period. Temporary differences are said to Areverse@, because if they cause book income to be higher (lower) than taxable income in one period, they must cause taxable income to be higher (lower) than book income in another period.

Permanent differences are differences that never reverse. That is, they are items of book (or tax) revenue or expense in one period, but they are never items of tax (or book) revenue or expense. They are either non-taxable revenues (book revenues that are non-taxable) or non-deductible expenses (book expenses that are non-deductible). Examples of permanent differences are (non-taxable) interest revenue on municipal bonds and (non-deductible) goodwill (GW) amortization expense under the purchase method for acquisitions.

Temporary differences cause *deferred taxes*, while permanent differences cause a firm=s *effective income tax rate* (book income tax expense) pre-tax book income) to differ from the statutory tax rate. We will first discuss temporary differences and then permanent differences.

Temporary Differences: Deferred Taxes
Accounting for temporary differences is called *deferred tax accounting* or *inter-period tax allocation.*[1] The terms refer to the fact that the total income tax expense recognized for books in a given period can be paid to the IRS over different periods (both before, during, and after book recognition); alternatively, the amount of tax (cash) paid to the IRS in a given period is recognized as book tax expense over different periods.

[1]Recall that *intra-period tax allocation* is the allocation of total book tax expense of a given period across the various categories on the income statement for that period.

Deferred Tax Assets and Liabilities

What drives deferred tax accounting is (the changes in) the deferred tax asset and liability accounts. *Deferred tax liabilities* are liabilities for taxes due in the future (future cash outflow for taxes payable) on income that has already been recognized for books. In effect, although you have already recognized the income on your books, the IRS lets you pay the taxes later (due to the timing difference). *Deferred tax assets* are reductions in future taxes payable, because you have already paid the taxes on book income to be recognized in the future (like a prepaid tax).

Because of the *matching principle*, we care about the *total* income tax expense to be matched against pre-tax book income, regardless of whether this expense involves a current cash outflow or not (just like any other expense under the accrual method). Under accrual accounting, not all expenses involve current cash outflows; some expenses (prepayments:assets) involve past cash outflows, and some expenses involve future cash outflows (payables:liabilities).

One way to think about deferred tax assets and liabilities is: because of the timing differences between tax and financial reporting, some of this period=s (book) income tax expense has been (pre)paid in prior periods, having caused a deferred tax asset when paid, that we now draw down (reducing current cash outflow); some of this period=s income tax expense will be paid in the future, causing a deferred tax liability now (also reducing current cash outflow). Some of the income tax expense is being currently paid, so it does not cause deferred tax assets or liabilities. Another way to think about deferred tax assets and liabilities is: some of the current tax cash outflow is paying for current taxes; some of the outflow is paying for past taxes (paying off a deferred tax liability); and some is paying for future taxes (building up a deferred tax asset).

The following table shows how the timing difference between book vs. tax revenue and expense and recognition causes deferred tax assets and liabilities. Simultaneous recognition (paying cash for current tax expense), of course, does not cause deferred taxes. There are thus 4 possible cases.

	Revenues	Expenses
recognize for books before taxes	1.Deferred tax liability	2.Deferred tax asset
recognize for taxes before books	3. Deferred tax asset	4. Deferred tax liability

In case 1, you show revenue for books now, but you will pay taxes on it in the future, causing a deferred tax liability (future cash outflow, increase in future taxes payable). In case 2, you show expenses for books now, but you will get the tax deduction in the future, causing a deferred tax asset (current cash outflow, reduction in future taxes payable). In case 3, you pay taxes now, on book revenues that you will recognize in the future causing a deferred tax asset (a prepaid tax, reduction in future taxes payable). In case 4, you take a tax deduction now for a future book expense, so you will have to pay more taxes in the future, causing a deferred tax liability (future cash outflow, increase in future taxes payable).

An example of #1 is an installment sale; revenue is recognized up front for financial reporting, but is recognized for tax purposes later, when cash is received each period.

An example of #2 is bad debts expense. The allowance method for books recognizes the expense in the period of sale by the adjusting entry (matching principle), while the direct write-off method
recognizes the expense in a later period, when the receivable is actually written off.

An example of #3 is a prepayment where revenue is recognized for tax purposes up front as cash is received , while accrual accounting delays revenue recognition until revenue is earned later.

An example of #4 is depreciation expense; firms use an accelerated method for taxes and SL for books. This combination recognizes some depreciation for taxes first and for books later.

RCJ give additional examples of revenues and expenses that produce deferred tax assets and liabilities in Table 13.1 on page 630.

Total Income Tax Expense on the I/S is the sum of 2 components, *current* plus *deferred*, either one of which (or both) can be positive or negative. The current part is the amount paid to (or refund received from) the IRS. If the current component is positive, the entry is:

DR	CR
(current) income tax expense	
	Cash or income taxes payable

The firm will credit the current liability because it makes its tax accrual as of December 31st, but sends the check a few weeks later. If the current component is negative, the entry is:

DR	CR
cash or income tax refund receivable	
	(current) income tax expense

Negative current income tax expense is due to a *Net Operating Loss (NOL)*, discussed below. Like in the positive case, either cash or a current asset account can be in the entry.

The deferred component of income tax expense is the other side in the journal entry to deferred tax assets/liabilities. Here are some possible cases.
(1) If deferred tax assets increase by 100 (DR) and deferred tax liabilities increase by 200 (CR), then deferred income tax expense is positive (DR) 100. The entry is:

DR		CR	
(deferred) income tax expense	100		
deferred tax assets	100		
		Deferred tax liabilities	100

(2) If deferred tax assets increase by 200 (DR) and deferred tax liabilities increase by 100 (CR), then deferred income tax expense is negative (CR) 100. The entry is:

DR		CR	
deferred tax assets	200		
		Deferred tax liabilities	100

(deferred) income tax expense 100

(3) If deferred tax assets decrease by 100 (CR) and deferred tax liabilities decrease by 200 (DR), then deferred income tax expense is negative (CR) 100. The entry is:

DR		CR	
Deferred tax liabilities	200		
		(deferred) income tax expense	100
		deferred tax assets	100

(4) If deferred tax assets decrease by 200 (CR) and deferred tax liabilities decrease by 100 (DR), then deferred income tax expense is positive (DR) 100. The entry is:

DR		CR	
(deferred) income tax expense	100		
Deferred tax liabilities	100		
		deferred tax assets	200

(5) If deferred tax assets increase (DR) and deferred tax liabilities decrease (DR), then deferred tax expense must be negative (CR). The entry is:

DR		CR	
Deferred tax liabilities			
Deferred tax assets			
		(deferred) income tax expense	

(6) If deferred tax assets decrease (CR) and deferred tax liabilities increase (CR), then deferred tax expense must be positive (DR). The entry is:

DR		CR	
(deferred) income tax expense			
		Deferred tax liabilities	
		deferred tax assets	

I have the shown the journal entries for the 2 components of income tax separately, but they can be combined into one. For example, assume that the current component of income tax expense is a positive (DR) 300, and the deferred component is as shown in entry #3, above. The combined entry is:

DR		CR	
Income tax expense	200		
Deferred tax liabilities	200		
		Cash or taxes payable	300
		Deferred tax assets	100

It is obvious from the entry that the current and deferred components of income tax expense are 300 and -100, respectively.

Note that income tax expense is like any other expense account under the accrual method in that the expense does not necessarily equal the cash outflow. In this sense, deferred tax accounting is just another example of accrual accounting.

Balance Sheet Method[2]

The method to compute the components of income tax expense and deferred tax assets and liabilities is called the balance sheet method. (1) Compute the current component of income tax expense (tax reporting), equal to current taxable income x currently prevailing tax rate. This is always the first step, because it is independent of financial reporting rules.[3] (2) Compute the deferred component of income tax expense by calculating the (changes in the) deferred tax asset and deferred tax liability accounts. It is important to know whether the timing differences are originating or reversing. If they are originating, construct a schedule of all future revenues and expenses for book and tax purposes. Multiply each future year=s timing difference (between book vs. tax revenue and expense) by the tax rate *expected to be in effect* at the time of future reversal. Then sum over all future years, to calculate the increase in the deferred tax asset (DR) or liability (CR) balances. If they are reversing, the decrease in the deferred tax asset (CR) or liability (DR) balance is the reversing amount x the tax rate used to create the balance originally. (3) Compute total income tax expense as the sum of the 2 components. RCJ flowchart this procedure in Figure 13.5 (page 644) and show a detailed example on pages 641-647. It is called the balance sheet method because you back into deferred (and thereby total) income tax expense via the changes in the B/S (deferred tax asset and liability) accounts. Thus,

deferred tax liability (asset) = future taxable (deductible) amount due to timing difference x future tax rate [or, future timing difference = deferred tax A or L) tax rate], and

Δdeferred tax liability (asset) = Δfuture taxable (deductible) amount x future tax rate [or, Δfuture timing difference = Δdeferred tax A or L) tax rate].

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[2]RCJ call this the *liability method.* The old (Income Statement) method computed total book income tax expense as the current tax rate x book income, and then subtracted the current income tax expense to compute deferred income tax expense. As long as there are no permanent differences and the current tax rate does not change in the future, both methods produce the same results. The B/S method is superior, because it can handle permanent differences and future tax rate changes, and because it explicitly isolates deferred tax assets and liabilities.

[3]The one exception is when taxable income is negative. See NOL=s, below.

Note that the B/S method absorbs the full effect of a tax rate change on net income in the year that the change is enacted (even if the rate change will not go into effect right away). This is because the beginning of year balances of deferred tax assets and liabilities are based on the old tax rate, while the end of year balances are based on the new tax rate (when the differences reverse); thus, the change in the balances, which equals the deferred tax expense, are affected right away. The effect on net income due to the rate change is a one-time, transitory effect (unless rates keep changing. The impact of the rate change on NI depends on: 1. the change in the tax rate 2. whether the firm has a net deferred tax asset or liability balance 3. the magnitude of the balance. RCJ summarize the tax journal entry procedure in Figure 13.8 (page 652).

Net Operating Losses (NOL=s)

An NOL is negative *taxable* income. Book income may be either positive or negative, it doesn=t matter. An NOL means that current and/or deferred income tax expense is negative (CR). An NOL firm has two choices. It can *carryback* the loss to offset past taxable income and get a refund of past taxes paid. The entry is:

DR	CR
cash or tax refund receivable	
	(current) income tax expense

The maximum carryback period is 2 years (offset the earlier year first, as in FIFO); i.e, a firm must have had positive taxable income in at least one of the past 2 years in order to carryback. Or, the firm can *carryforward* the loss to offset future income (also FIFO) and thereby reduce the payment of future taxes, producing a deferred tax asset. The entry is:

DR	CR
deferred tax asset	
	(deferred) income tax expense

A firm can carryforward an NOL for up to 20 years. Thus, NOL carryforwards are another source of deferred tax assets, in addition to the timing differences discussed above. Why would a firm choose to carryforward (other than not being able to carryback because of 2 years of losses)? The Atime value of money@ incentive says to get the cash now (carryback). But, if tax rates are expected to go up in the future, a dollar of deduction will become worth more, so this incentive says to wait (carryforward).

Deferred Tax Asset Valuation Allowance

A deferred tax asset is a reduction in future cash outflow (taxes to be paid). But, the asset has value only if the firm expects to pay taxes in the future. For example, an NOL carryforward is worthless if the firm does not expect to have positive taxable income for the next 20 years. Since accounting is *conservative*, firms must reduce the value of their deferred tax assets by a deferred tax asset *valuation allowance*. This is a contra-asset account (CR balance on the B/S - just like accumulated depreciation or the allowance for uncollectible accounts) that reduces the deferred tax asset to its expected realizable value. The easiest way to record the valuation allowance is to record the deferred tax asset in the usual way (as if there were no valuation allowance) and then to make an additional entry:

DR	CR
(deferred) income tax expense	

deferred tax asset valuation allowance

Note that increasing the allowance (CR) increases deferred income tax expense; decreasing the allowance does the opposite. Increases in the valuation allowance are recorded by the above entry, and decreases in the allowance are recorded by a reversal of the entry. Thus, changes in the allowance affect income tax expense, and are another reason why the B/S method is superior to the I/S method. Although the need for an allowance is subjective, its existence and magnitude reveals management=s expectation of future earnings. Management can use changes in the allowance to Amanipulate@ NI, by affecting income tax expense.

Permanent Differences - Effective Tax Rates

The importance of permanent differences is that they cause the effective income tax rate to differ from the statutory (government) rate (T); non-deductible expenses raise the effective income tax rate, while non-taxable revenues lower the effective income tax rate. To see this, write the effective income tax rate (ETR) as:

$$ETR = \frac{\text{current tax expense + deferred tax expense}}{\text{Taxable income + temp diffs - non-deductible expenses + non-taxable revenues}}$$

By definition, $\frac{\text{current tax expense}}{\text{taxable income}} = T = \frac{\text{deferred tax expense}}{\text{Temp diffs}}$

Thus, $T = \frac{\text{current tax expense+deferred tax expense}}{\text{taxable income + temp diffs}}$

Note that in the absence of permanent differences, T equals the statutory tax rate. From the definitions for ETR and T, non-deductible expenses lower the denominator of ETR, raising the ratio above T; non-taxable revenues raise the denominator of ETR, lowering the ratio below T. RCJ give some examples of permanent differences in Table 13.2 on page 632. Additionally, the tax footnote disclosure (see below) contains a reconciliation between the effective and the (federal) statutory tax rates; permanent differences can be a key component of this difference.

Financial Statement Disclosures

Total income tax expense is shown on the I/S, while the *net* current and *net* non-current deferred tax asset or liability are shown on the B/S.[4] The following additional information is disclosed in a footnote: (1) current and deferred components of total income tax expense, (2) reconciliation between the federal statutory and effective tax rates, and (3) components of deferred tax assets and liabilities (e.g., revenue and expense items that cause the deferred tax assets and liabilities, such as depreciation, bad debts, installment sales, etc.), both at the end and at the beginning of the year (remember that the net change is the other side of the entry for deferred tax expense).

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[4]Current deferred tax assets and liabilities are grouped separately from non-current deferred tax assets and liabilities, and a net position is determined for each group. Current vs. non-current is determined by the specific asset or liability (e.g., PPE, A/R, etc.) that the deferred tax asset or liability relates to. If there is no specific asset or liability linkage, use the expected reversal date of the temporary difference.

An example of the required disclosure is in Exhibit 12.2 on pages 628-629, which shows the tax footnote for Amoco Corp. Note the three parts of the disclosure. From part (1), you can deduce the tax journal entry, except that you cannot determine whether the offset to deferred tax expense is deferred tax assets and/or liabilities (part (3) enables you to do this). Note that the information in part (1) pertains only to Income From Continuing Operations (because the Abelow the line@ components are shown net of tax). From part (2), you can tell why the firm=s book income is taxed at a higher or lower rate than the statutory rate, which tells you about the firm=s tax policy (i.e., is the firm using the tax system effectively).[5] Part (3) shows the beginning of year and end of year balances in the components of the firm=s deferred tax assets and liabilities. This data can be used for the tax journal entry and to know what specific accounts cause the timing differences.

Large increases in deferred tax liabilities or decreases in deferred tax assets might require special scrutiny. Such changes are Alegitimate@ if they are associated with increases in the underlying assets or liabilities, such as PPE or A/R, which can be deduced from the SCF. Changes that can=t be linked with underlying assets or liabilities might indicate manipulation of NI, via changes in accounting estimates. For example, an increase in depreciable life (for books) lowers book dep=n, increasing the excess of tax dep=n over book dep=n, increasing the deferred tax liability.

Changes in deferred tax assets and liabilities can also be used to compute expenses and revenues on the firm=s tax return. As pointed out above, *Δfuture timing difference = Δdeferred tax A or L) tax rate*. Thus, the Δdeferred tax A or L from the footnote can be used to compute the Δfuture timing difference, which is the current year=s difference between book vs tax revenue or expense. This can then be added to or subtracted from the book revenue or expense to compute the corresponding tax figure. RCJ (pg 657) show an example with depreciation.

Note that *current federal tax expense=federal statutory tax rate x taxable income*; *or current federal tax expense) federal statutory tax rate = taxable income.* The ratio pre-tax book income/taxable income can be used as a measure of accounting conservatism (i.e., earnings quality). Taxable income is a very conservative performance measure (because firms try to minimize tax payments). The lower (higher) the ratio, the more conservative (aggressive) is the firm=s accounting. Using this ratio, one can then compare different companies at a point in time, or one company over time.

[5]Amoco=s major reconciling item is Tax Credits, which are a permanent difference.

CERTIFICATE OF SERVICE

I, Sharon Ferguson, hereby certify that I have this day, served copies of the following document on the attached list of persons by electronic filing, certified mail, e-mail, or by depositing a true and correct copy thereof properly enveloped with postage paid in the United States Mail at St. Paul, Minnesota.

Minnesota Department of Commerce
Comments

Docket No. E015/M-16-776

Dated this 5th day of May 2017

/s/Sharon Ferguson

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