

# Bureau of Engraving and Printing

FY 2014

## Capital Investment Plan

The Bureau of Engraving and Printing's (BEP) capital investment strategy is comprised of several broad investment categories with more specific smaller projects in each category.

The Bureau's mission to develop and produce U.S. Currency notes, trusted worldwide, demands that BEP continually update and improve its manufacturing processes by investing in new technologies and innovations. As outlined in our budget submission documents, the Bureau is in the process of completing multi-year investments in state-of-the-art printing, electronic inspection and finishing equipment for our Washington, DC and Fort Worth, Texas production facilities.

The Bureau uses sophisticated information technology (IT) and IT-embedded investments (i.e. sophisticated manufacturing and inspection equipment) in supporting the technical development and manufacturing of Federal Reserve notes. The technological sophistication of BEP's manufacturing platforms requires a commensurate investment in the Bureau's information technology to ensure that the Bureau's quality management system meets the demands of the 21<sup>st</sup> century. These investments will enable nearly all of the Bureau's production related business decisions to be driven by near real-time manufacturing performance metrics.

In addition, the Bureau is focused on building the capability to produce new currency designs with tactile features to provide meaningful access to US currency for the blind and visually impaired. Extensive market research was launched to identify potential methods of giving meaningful access and additional security features to U.S. banknotes and it was determined that a rotary screen printing press provided the needed flexibility in developing potential banknote features for the future. The Bureau is in the process of acquiring a single commercial rotary screen press to test the technology's capability of meeting the production specifications of US currency notes.

BEP participates as a partner in significant Treasury-wide enterprise level investments such as Homeland Security Presidential Directive-12, HRConnect (a Human Resources Line of Business service provider) and the Treasury Learning Management System (TLMS).

The Bureau's IT portfolio includes a 'cloud first' approach to implementing business systems. The Oracle eBusiness Suite is an integrated manufacturing suite which runs at the Oracle Corporation's "Federal on Demand" Shared Service Center in Austin, Texas.

### **Major IT Investment Summary**

Bureau of Engraving and Printing does not plan for any major-IT capital investments in FY 2014.

## **Major Non-IT Investment Summaries**

### ***Currency Sheet Accountability System***

The purpose of this investment is to develop an automated currency sheet accountability system on one production line at the Washington DC Facility to evaluate operational and interface requirements for potential full deployment of a sheet accountability system on all production lines. An currency automated sheet accountability system would replace a manual process and provide BEP with the capability to electronically track and account for currency sheets throughout the production process, from blank sheets to finished notes. Implementing this system would afford BEP better control and accountability of printed and unprinted sheets on the production floor, and would eliminate sheet count variances that sometime occur between production steps.

#### **Cost:**

The immediate (base + FY 2014 request) cost is estimated at \$5,000,000 with a full life-cycle estimated cost of \$6,000,000.

#### **Projected useful life:**

FY 2014 - FY 2024

#### **Timeframe for the “development, modernization and enhancement” or DME phase of the investment:**

1. Estimated start 10/01/2013; end 09/30/2014)

#### **Anticipated benefit(s) of the investment:**

1. Enhanced security and accountability
2. Facilitates comprehensive quality control and tracking of production
3. Full sheet and note counting verified at each production step
4. Real time data will be available to assist in decision making

#### **How performance will be measured and evaluated:**

1. Tie consumables to specific sheets and individual notes via serial number.

***Test Screen Press (Tactile Feature Development)***

The acquisition of a test (rotary) screen press will give the BEP the ability to perform production test and validations of the technology's capability of meeting the specifications of US currency notes. The press will be used to test the application of proposed tactile features for future note designs in accordance with the public requirement to the blind and visually impaired community, as well as provide continued advancements in security banknote printing by utilizing a wide range of materials and designs to improve counterfeit deterrence.

This equipment provides the BEP with the means to test and utilize a wider range of materials and designs available to keep pace with the changing advancements in security banknote printing occurring throughout the world. The test screen press would also provide the Bureau with the capability of exploring changes to current more costly methods of applying security features, i.e. Optically Variable Inks (OVI) in an effort to decrease cost and enhance features.

**Cost:**

The immediate (base + FY 2014 request) cost is estimated at \$10,000,000 with a full life-cycle estimated cost of \$26,000,000.

**Projected useful life:**

FY 2014 - FY 2029

**Timeframe for the “development, modernization and enhancement” or DME phase of the investment:**

- 1 Estimated start 10/01/2012; end 09/30/2014.

**Anticipated benefit(s) of the investment:**

- 1 Apply a tactile feature on future note designs
- 2 Enhance counterfeit deterrence

**How performance will be measured and evaluated:**

- 1 Notes being accepted by the FRB and visually impaired and blind community.

### ***Single Note Inspection (SNI)***

The primary goal of this investment is to acquire the equipment and capability needed to inspect individual NXG\$100 notes as requested by the Federal Reserve Board to ensure all notes in circulation adhere to strict production standards.

During the initial production of the new NXG\$100 banknotes, BEP experienced creasing and other production defects which could not be detected with existing inspection equipment. BEP's existing inspection equipment is designed to identify print defects, not specific paper defects or production related anomalies. Since the \$100 denomination banknote is the premier international note issued by the Federal Reserve Board (FRB) and used worldwide, BEP discontinued production until the source of these problems could be identified and inspected. As a result, the Federal Reserve Board requested the Bureau to use Single Note Inspection for the finished NXG\$100 notes held in our vaults before they will accept the notes for issuance into circulation.

In the future, BEP plans to incorporate single note inspection into the production process to eliminate the unnecessary destruction of good notes. The implementation of SNI into the production process will assist BEP in maintaining the high quality standards of banknotes being delivered to the FRB. SNI will eliminate the opportunity of poor quality notes being placed in circulation and improves counterfeit enforcement's identification abilities. BEP expects to redesign United States currency every seven to ten years in an effort to stay ahead of counterfeiters as advances in technology make counterfeiting of currency less difficult. SNI provides greater assurance that new features have been properly replicated and manufacturing processes are consistent.

### **Cost:**

The immediate (base + FY 2014 request) cost is estimated at \$18,000,000 with a full life-cycle estimated cost of \$47,650,000.

### **Projected useful life:**

FY 2013 – FY 2023

### **Timeframe for the “development, modernization and enhancement” or DME phase of the investment:**

1. Estimated start 10/01/11; end 09/30/14.

### **Anticipated benefit(s) of the investment:**

1. Improve the quality of notes in circulation
2. Reduce spoilage
3. Improve counterfeit deterrence
4. Recover good notes from rejected sheets
5. Fewer Manual Functions
6. Improved Customer Satisfaction

### **How performance will be measured and evaluated:**

1. Percent of \$100NXG notes recovered currently in BEP vaults.
2. Percent of recovering good notes from the rejected subject sheets
3. Percent of spoilage

***ECF Visitor Center***

The BEP is one of the most popular tourist attractions in the Washington, DC area. This investment will renovate the Bureau of Engraving and Printing's (BEP) Washington, DC Tour and Visitor Center for safety reasons. Each year approximately 200,000 tourists take the BEP's free public tour to see our Nation's currency being printed and to learn about newly designed currencies, their security features and new printing technologies. The tour facility consists of a long entrance area (tour-bridge) where visitors view a short film on the BEP's history and production process, an elevated tour walkway over the production floor, and a visitor center consisting of gift shops and a small amount of educational exhibits. Over the last 20 years there have been few upgrades made to the tour facility's infrastructure and exhibits. As a result, the tour has become antiquated and is in dire need of structural repair and renovation

**Cost:**

The immediate (base + FY 2014 request) cost is estimated at \$2,000,000 with a full life-cycle estimated cost of \$4,400,000.

**Projected useful life:**

FY 2014 – FY 2034

**Timeframe for the “development, modernization and enhancement” or DME phase of the investment:**

1. Award AE Design contract FY13. (start 10/01/12; end 09/30/13)
2. Award contract for construction (start 10/01/13; end 09/30/14)

**The anticipated benefit(s) of the investment:**

1. Improve Safety and Environmental Hazards
2. Improve customer and public satisfaction

**How performance will be measured and evaluated:**

1. Percentage of customer satisfaction survey results rated good or better.

***Retooling***

Retooling is a multi-year project that replaces older, fully depreciated production equipment at both BEP's facilities. Replacing out of date equipment on a regular basis allows BEP to more cost effective and efficient in meeting customer requirements for the production of currency notes. New equipment is typically more energy efficient, eco-friendly and machine down time is reduced. In addition, new equipment acquired by BEP has the technical capability of producing the next generation of advanced counterfeit deterrence features for future design enhancements.

**Cost:**

The immediate (base + FY 2014 request) cost is estimated at \$4,000,000 with a full life-cycle estimated cost of \$14,720,000.

**Projected useful life of the asset**

FY 2014 – FY 2024

**Timeframe for the “development, modernization and enhancement” phase of the investment for FY 2014:**

1. Award contract for equipment (start 10/01/13; end 09/30/14)

**The anticipated benefit(s) of the investment:**

1. Produce notes at a lower cost with higher quality
2. Enhance counterfeit deterrence
3. Improve productivity
4. Improve customer and public satisfaction

**How performance will be measured and evaluated:**

1. Comparison of productivity of new equipment with existing equipment.
2. Comparison of spoilage rates of new equipment with rates of existing equipment.

### ***Manufacturing Support Equipment***

The project is a multi-year project that replaces older, fully depreciated manufacturing support equipment at both BEP's facilities. Replacing out of date equipment on a regular basis allows BEP to more cost effective and efficient in meeting customer requirements for the production of currency notes. New manufacturing support equipment is typically more energy efficient, eco-friendly and reduces machine down time. In addition, new support equipment acquired by BEP has the technical capability of producing the next generation of advanced counterfeit deterrence features for future design enhancements.

#### **Cost:**

The immediate (base + FY 2014 request) cost is estimated at \$1,000,000 with a full life-cycle estimated cost of \$4,860,000.

#### **Projected useful life of the asset:**

FY 2014 – FY 2024

#### **Timeframe for the “development, modernization and enhancement” phase of the investment for FY 2014:**

1. Award contract for manufacturing support equipment (start 10/01/13; end 09/30/14)

#### **The anticipated benefit(s) of the investment:**

1. Produce notes at a lower cost with higher quality
2. Enhance counterfeit deterrence
3. Improve productivity
4. Improve customer and public satisfaction

#### **How performance will be measured and evaluated:**

1. Comparison of productivity of new equipment with existing equipment.
2. Comparison of spoilage rates of new equipment with rates of existing equipment.



### ***Consolidated Facility Improvements***

Consolidated facility improvement projects include minor renovations, safety and structural upgrades to BEP facilities.

#### **Cost:**

The immediate (base + FY 2014 request) cost is estimated at \$3,000,000 with a full life-cycle estimated cost of \$8,691,000.

#### **Projected useful life of the asset:**

FY 2014 – FY 2034

#### **Timeframe for the “development, modernization and enhancement” phase of the investment for FY 2014:**

1. Award AE Design contract FY13. (start 10/01/13; end 09/30/14)
2. Award contract for construction (start 10/01/13; end 09/30/14)

#### **The anticipated benefit(s) of the investment:**

1. Improve safety
2. Reduce environmental hazards
3. Increase efficiencies

#### **How performance will be measured and evaluated:**

1. Comparison of the workflows before and after project completion
2. Customer satisfaction survey results

***Integrated Security System-HSPD-12***

This project includes complete replacement of the security systems at the Washington, DC and Fort Worth, TX facilities. By acquiring a new Integrated Security System the BEP will be in full compliance with the Homeland Security Presidential Directive 12 (HSPD 12).

**Cost:**

The immediate (base + FY 2014 request) cost is estimated at \$1,530,000 with a full life-cycle estimated cost of \$18,530,000.

**Projected useful life:**

FY 2014 – FY 2021

**Timeframe for the “development, modernization and enhancement” or DME phase of the investment:**

1. Estimated start 10/01/13; end 09/30/14.

**Anticipated benefit(s) of the investment:**

1. Common hardware and software operating platforms
2. Allow each facility to be the back-up for the other
3. Compliance with HSPD-12

**How performance will be measured and evaluated:**

1. Both security systems be in full compliance with HSPD-12